STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION CALIFORNIA TRAFFIC CONTROL DEVICES COMMITTEE

MEETING OF THE
CALIFORNIA TRAFFIC CONTROL DEVICES COMMITTEE

NAPA VALLEY COLLEGE

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NAPA, CALIFORNIA

THURSDAY, JULY 25, 2013 9:00 A.M.

Reported by: Richard A. Friant

APPEARANCES

Committee Members

Michael Robinson, Chairman

Hamid Bahadori, Vice Chairman

Janice Benton

Robert Brown

John Ciccarelli

Mark Greenwood

Bryan Jones

Rick Marshall

Larry Patterson

Lt. David Ricks

Alternate Committee Members in Attendance

Rock Miller

Bill Winter

Caltrans Staff - Sacramento Office

Devinder Singh, Committee Secretary

Don Howe

Martha Styer

Caltrans Staff - Field Offices

Jerilyn Struven District 4

APPEARANCES

Also Present

The Honorable Brad Wagenknecht County of Napa Board of Supervisors District 1 Representative and Chair

Sze Lei Leong Metropolitan Transportation Commission

Jaime Maldonado Metropolitan Transportation Commission

Steve Terrin Metropolitan Transportation Commission

Maurice Palumbo Golden Gate Bridge District

Raymond Santiago Golden Gate Bridge District

Zaki Mustafa Los Angeles Department of Transportation

Stephen M. Pyburn
US Department of Transportation
Federal Highway Administration

Jay Beeber Safer Streets LA

Chad Dornsife
Best Highway Practices Institute
National Motorists Association

Ricardo Olea San Francisco Municipal Transportation Agency

Gary Biller National Motorists Association

Eric Widstrand Sam Schwartz Engineering

The Honorable Adrin Nazarian Member of the California State Assembly

A P P E A R A N C E S

Also Present

Mark Riggs Redflex Traffic Systems

Garland Wong City of Fairfield

Erin Riches California State Senate Transportation and Housing Committee

Ted Link-Oberstar California State Senate Office of Research

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PROCEEDINGS

9:00 a.m.

CHAIRMAN ROBINSON: Good morning, everybody. This will be the start of our July 25th California Traffic Control Devices Committee Meeting here in Napa, California. Beautiful place. Like the college campus atmosphere. I was just noticing as I was walking into the campus some of the beautiful view sheds that you can see out into the hills. What a lovely campus this is.

I would like to introduce our -- actually our panel today, our committee. We'll start down on my right with John.

COMMITTEE MEMBER CICCARELLI: John Ciccarelli,
Bicycle Solutions, San Francisco, representing non-motorized
travelers for Caltrans.

COMMITTEE MEMBER PATTERSON: I'm Larry Patterson, the Public Works Director for the city of San Mateo. I am representing the League of California Cities, Northern California.

COMMITTEE MEMBER MARSHALL: Rick Marshall, Deputy
Director of Public Works for Napa County and I am
representing California counties, Northern.

23 COMMITTEE VICE CHAIRMAN BAHADORI: I am Hamid 24 Bahadori with the Automobile Club of Southern California.

COMMITTEE CHAIRMAN ROBINSON: And I am Mike

Robinson, Deputy Director of Public Works for the County of San Diego. I represent the Southern California Counties.

COMMITTEE SECRETARY SINGH: I am Devinder Singh, I am Secretary for the Committee.

COMMITTEE MEMBER BENTON: I am Janice Benton in Caltrans Traffic Operations; I am representing the Caltrans Department.

COMMITTEE MEMBER RICKS: David Ricks, Lieutenant, California Highway Patrol.

COMMITTEE MEMBER JONES: Bryan Jones from the City of Carlsbad representing non-motorized users of our roadways.

COMMITTEE MEMBER BROWN: I am Bob Brown with AAA of Northern California.

COMMITTEE MEMBER GREENWOOD: I'm Mark Greenwood; I am the Director of Public Works for the City of Palm Desert and I am representing the Southern California cities for the League of California Cities.

COMMITTEE CHAIRMAN ROBINSON: And if we can just go around in the audience too. Let's start with Rock.

(Thereupon, members of the audience introduced themselves away from the microphone.)

ALTERNATE COMMITTEE MEMBER MILLER: I am Rock
Miller with Stantec Consulting; alternate to the Committee
representing non-motorized travel and alternate to Bryan

- 1 Jones.
- 2 SUPERVISOR WAGENKNECHT: I'm Brad Wagenknecht from
- 3 Napa County.
- 4 MR. DORNSIFE: Chad Dornsife, Best Highway Safety
- 5 Practices and National Motorists Association.
- 6 MR. MALDONADO: Jaime Maldonado with MTC, I work
- 7 on Freeway Services, Call Box.
- 8 MR. TERRIN: I'm Steve Terrin from MTC,
- 9 (inaudible).
- 10 MR. LEONG: I'm Sze Lei Leong, also from MTC, the
- 11 Call Box Program.
- 12 MR. OLEA: Ricardo Olea with the City and County
- 13 of San Francisco.
- 14 MR. PALUMBO: Maurice Palumbo, Golden Gate Bridge,
- 15 San Francisco.
- MS. STRUVEN: Jerilyn Struven, Caltrans Traffic,
- 17 District 4.
- 18 ALTERNATE COMMITTEE MEMBER WINTER: Bill Winter,
- 19 Los Angeles County Public Works, alternate to the Southern
- 20 California County representative.
- 21 MR. PYBURN: Steve Pyburn, Federal Highway
- 22 Administration.
- 23 MR. WIDSTRAND: Eric Widstrand, Sam Schwartz
- 24 Engineering.
- MR. RIGGS: Mark Riggs from Redflex Traffic

1 Systems.

SPEAKER IN THE AUDIENCE: We are introducing if you would like to stand up and introduce yourself.

MS. RICHES: Erin Riches, I'm with the Senate
Transportation and Housing Committee.

MR. LINK-OBERSTAR: Ted Link-Oberstar, Senate Office of Research.

MR. WONG: Garland Wong, City of Fairfield.

MR. HOWE: I'm Don Howe with Caltrans Traffic Operations.

11 MS. STYER: I'm Martha Styer, Caltrans
12 Headquarters Operations.

COMMITTEE CHAIRMAN ROBINSON: Okay, thank you.

And now just for some general housekeeping. The restrooms, should you need them, are out this back door to my left. And then there's water and some snacks if you start to feel queasy like sometimes I do so they are all available in the back.

Rick, we have some introductory remarks?

COMMITTEE MEMBER MARSHALL: It is my pleasure to have this be the first time I am hosting the Committee here in Napa and I invited the Chairman of our County Board of Supervisors, Brad Wagenknecht, to address the Committee and welcome us all here to what is my home.

SUPERVISOR WAGENKNECHT: Yes it is, it's your home

and my home.

I was riding my bike down to the office this morning and, you know, I ride down the same path every day and I look out and I see all the houses and the people that I -- I think about the houses and the people that I know. It's very nice to be in a nice, comfortable spot. As has been pointed out it's a beautiful, beautiful place to do. And coming down at 6:30 in the morning it's kind of peaceful doing that at that point.

But it's nice to get out sometimes and out of your -- out of your normal place and we welcome you to Napa if this is not your normal place. It's Rick's and mine's. He just lives a few blocks away from where I live so it's Rick's and my normal place and it's our normal commute, the two miles down Brown's Valley Road to -- to the office. But for you, you all, it's a different spot.

We are in Napa and so I -- I brought a little wine to share. Obviously this is not enough to share for all of us. We know -- we know how to do wine in Napa, if you haven't heard. And this is from the Carneros area, which is in my district and it's a -- it's a -- it's a pinot noir but it's done in the vin gris style, so you can see that.

But for whoever can guess what district this is from -- Rick you're not allowed -- what district this is from from the Napa Valley, I will give you my bottle of vin

gris. If that's all right?

COMMITTEE VICE CHAIRMAN BAHADORI: It's from the best district.

(Laughter.)

SUPERVISOR WAGENKNECHT: Good answer but. And don't drink this and then drive home. It likes to be chilled. This is one of those that it's really nice for a summer evening like we have had in the last while. Any guesses?

COMMITTEE MEMBER CICCARELLI: The Carneros district.

SUPERVISOR WAGENKNECHT: Carneros, yeah. I'm just

13 -- I'm just -- it's my supervisor district.

14 COMMITTEE CHAIRMAN ROBINSON: District 1.

SUPERVISOR WAGENKNECHT: District 1, there you

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17 (Laughter.)

SUPERVISOR WAGENKNECHT: Welcome to Napa. Learn a lot, get a lot out of it. And if you have a few minutes go out to the Carneros. The Carneros is just across the river this way. Most of our visitors go up Valley but the Carneros is a very nice, beautiful area to visit.

Saintsbury is a winery that is owned by a friend of mine that was my Planning Commissioner on the Napa County Board but also he went to the University of California,

Santa Cruz where I went also so it's nice to share that.

But welcome to Napa and I wish you the best for your day. Thank you.

4 COMMITTEE CHAIRMAN ROBINSON: Thank you,

Mr. Chairman. And please, it is such a beautiful area. I hope even though you live here you can still appreciate it.

SUPERVISOR WAGENKNECHT: I still can.

COMMITTEE CHAIRMAN ROBINSON: Some of these things just can't be taken for granted.

SUPERVISOR WAGENKNECHT: That will be a good picture to have here, the wine in front of traffic devices.

(Laughter.)

SUPERVISOR WAGENKNECHT: Thank you.

COMMITTEE CHAIRMAN ROBINSON: Thank you.

other bit of housekeeping as we commence. I just want to make sure everybody knows that you do need a parking permit on campus today and there are machines -- both of the lots in either direction there is a machine. And it's \$2 and put the permit in your dash. If you haven't done so already please do. Thank you.

COMMITTEE CHAIRMAN ROBINSON: And I believe Janice has an announcement.

COMMITTEE MEMBER BENTON: Yes. In honor of our Chairman retiring from the Committee on behalf of the

department and specifically our Deputy Director for

Maintenance and Operations we would like to give you this

signed letter. It says:

"Dear Mr. Robinson:

"On behalf of the California Department of Transportation and California road users I thank you for your two years of dedicated and professional service as Chairman of the California Traffic Control Devices Committee.

"Your commitment to traffic safety and the uniformity of traffic control devices has been an inspiration to traffic engineering professionals during adoption of the 2012 California Manual on Uniform Traffic Control Devices your contribution was invaluable and helped the Committee develop a comprehensive manual.

"On behalf of Caltrans and the Committee Members I thank you again for your outstanding public service to the road users of California. I wish you every happiness in your retirement."

It's signed by Steve Takigawa, our Deputy Director of Maintenance and Operations.

COMMITTEE CHAIRMAN ROBINSON: Does that signature

-- is it also a get out of jail free?

(Laughter.)

COMMITTEE MEMBER BENTON: It depends on who you

talk to, I think. So congratulations, Mike.

COMMITTEE CHAIRMAN ROBINSON: When I mae the decision to retire this wasn't on the top of my thinking. I wish I could have stuck around and seen more of this. The last couple of years have been just amazing. You get as far along as I have in your career and you think you have seen and heard it all but it is not until you sit on this committee that you realize that there is just so much farther to go.

Every day is a change and this committee is -- we are very fortunate to be able to sit here it and witness it and be a part of it. I really appreciate all the time that I have been able to spend on this. It's something I'll never forget. Thank you all for your support.

COMMITTEE MEMBER BENTON: Thank you, Mike.

COMMITTEE CHAIRMAN ROBINSON: Okay, we'll jump right in. We have got approval of minutes from the March 2013 meeting. Any changes to the minutes?

If not I would entertain a motion to approve.

COMMITTEE MEMBER MARSHALL: I move approval.

COMMITTEE CHAIRMAN ROBINSON: Is there a second?

COMMITTEE MEMBER GREENWOOD: Second.

COMMITTEE CHAIRMAN ROBINSON: We have a motion and

a second. The motion is to approve as written. All in

25 favor signify by saying aye.

(Ayes.)

COMMITTEE CHAIRMAN ROBINSON: Any opposed?

COMMITTEE MEMBER PATTERSON: If I may, Mr. Chair?

I would just like to abstain since this is my first time on the Committee.

COMMITTEE CHAIRMAN ROBINSON: Thank you, Larry.

Okay, so with one abstention it passes unanimously.

And now it's time for our public comments. Do we have any members of the public that would like to speak in front of the CTCDC?

Seeing none we will move directly into our agenda items. The first item is a proposal to amend Section 2I.10, Travel Info Call 511 sign of the CA Manual of Uniform Traffic Control Devices. This is submitted by MTC. Rick, this is your item and we've got somebody here to speak on it?

COMMITTEE MEMBER MARSHALL: Yes, another first for me. This is my first item as a sponsor so I hope I didn't overdo it and take it too far. But anyway, we had a preview of the subject at our meeting last time. And between then and now I have worked together with Sze Lei Leong from MTC to develop the recommendation that is before you today and he is going to present the background and recommendation. Take it away.

MR. LEONG: Thank you, Rick. Good morning,
Committee Members, Mr. Chairman. My name is Sze Lei Leong
and I represent the Metropolitan Transportation Commission
here and in the Bay Area.

I am here to present our request for approval for the modification to Section 2I.10, which is -- which includes or will add the sign here that you see here, "Freeway Assist Call 511." And this will coexist with the existing sign that is in the Section 2I.10, which is the "Travel Info Call 511" sign, so both signs will coexist.

Just an item for clarification. I came to the Committee in March as an informational item only and one question that was posed was whether this item was presented in the past before. The past effort was actually by Los Angeles MTA for the "#399" sign so it was actually a completely separate effort. So this is the first time, as you mentioned, this is the first time that we're presenting this item.

Secondly, before I move on to my presentation is you should have in front of you an amended version of the text in the MUTCD. Let me know if you don't have it. But this is what supersedes what you have in the agenda. But I will also have it in the presentation here.

What I want to give you is a preview of or an overview of the Call Box Program because this sets the --

this will give some context on why we are recommending our proposal.

The Call Box Program in the Bay Area consists of just about 2,000 call boxes and it is paid for by the -- when we register our vehicles, \$1 of which goes to pay for this program as well as other motorist services or motorist information programs like the Freeway Service Patrol Program.

We receive just about 50 to 60 daily calls from the Call Box Program. Back starting in 2008 we started allowing cell phones to call 511 and to request freeway assistance. So essentially users who are using cell phones and people who are calling at the call boxes, they essentially get brought into the same call answer center for the same type of service. And that service is roadside services, including FSP, or private auto club including AAA or CHP rotational tow.

Now it is probably no surprise that cell phone usage has gone up and call box call volume has decreased. So staff has developed a plan to address this trend.

This slide here, the next one, it's a little small but in summary, there is a line here that shows where -- what we have done in the past and what our plan is intended to do right here. This red line shows the number of call boxes where we started back in 2001, 3300 call boxes, down

to 2200 call boxes here. This line shows the trend of reduced call volumes from the call boxes and this blue line shows the gradual increase of freeway assistance calls or calls from using a cell phone.

Now the plan that I am talking about, the reduction plan, is this line right here. Which in 2013 is going to have a reduction of just about a total of 500 call boxes, 430 of which are within urban areas. So the reduction plan is to reduce this -- as a result of -- it causes this here, a reduction in call boxes, but also eventually a reduction in call boxes within the urban areas. Probably most, if not all, the urban call boxes, with the exception of bridges, tunnels and tubes.

Now the point that I want to show here is that while we are reducing call boxes we need to maintain a lifeline system for the public motorist to be able to call for help, hence the 511 freeway assistance program.

So where do we stand in terms of this reduction plan? Well, this reduction plan began back in 2011 where we involved or joined in with our partner agencies, CHP and Caltrans, to refine this reduction plan. And so the outcome of this reduction plan was a list of call boxes that we went through extensive research to determine which call boxes to remove. So essentially it's every other call box for this first phase. This plan, again, it's a multi-phase plan

where in the first phase we remove every other call box and then later on we'll remove call boxes in corridors and then eventually most, if not all, urban call boxes.

So what does this plan look like visually? This map shows -- it's difficult to see but every dot represents a pair of call boxes. And as you see the call box is distributed throughout all nine county areas, it covers all major highways and freeways and it is also on a few county local roads here.

Now what I'll do is zoom in to that area, the 680/580 interchange, to give you an idea of what the first phase of this reduction plan will result in. Each of those pair of dots is a call box and there is a number that denotes what that call box number is. For example, AL-580-238. So it's Alameda, Highway 580, post mile 238, for example.

So this is what exists currently. There are supposed to be red dots representing the call boxes that we will be removing and in place installing these 511 Freeway Assist signs on the existing call box poles. So what the driver will see is a sequence of call box and a freeway sign, call box et cetera. And currently it would be spaced between one to two miles. So that's Phase 1, which is for 2013 and into 2014.

Subsequently, Phase 2 and 3, this is several years

down the line. What we intend to do is remove the urban call boxes and leave the freeway assist signs. So the spacing for that will be about -- about three miles or longer.

So we anticipate about 430 signs to be installed within urban areas. And to make sure that the wording "Freeway Assist" is the most applicable and direct way of describing the service we were -- we took the advisement of Caltrans staff to go through some focus groups and surveys to make sure of what is that wording that we want to name this program, this program to call 511 and to receive freeway assistance. We did conduct several focus groups beginning in March and concluding in June and some surveys just to make sure that the wording is accurate. So in conclusion, "Freeway Assistance" is the wording that most accurately depicts the type of service that we offer through the 511 service.

Given that, what I show here is in Section 2I.10, our recommendation to add to the section our Freeway Assist Call 511 sign. On the left is what is currently in the -- in the Manual and on the right is what we propose in addition to this.

So the final sign layout, what is intended to be done is to mirror closely the specifications of the Travel Info Call 511 sign. And we will work with Caltrans

representatives to make sure that the signs are within specification. What is different is the logo, which is our local logo, 511 logo that we use when in the Bay Area, the wording. And here you will see that what we propose is the call box numbering scheme.

Now that is what we use here in the Bay Area for CHP and for our call center to locate the motorist wherever they are. So they'll call 511. And if they happen to be near that sign they can tell that sign number and they will be able to find out where they are. Now we are open to another way-finding number if this Committee desires or removing that number altogether. But our recommendation is to have a way-finding number to help the stranded motorist be located in a more efficient manner.

So what do these signs look like in the field?

Well what we have done is -- these photographs were taken in Los Angeles but we superimposed the "Travel Info," this sign here, onto this pole and that sign here. So in Los Angeles there are "Travel Info Call 511" signs on call box poles and so we superimposed the "Freeway Assist Call 511" sign to give an idea of what it will look like here. Los Angeles currently uses a 54x72 sign so our recommendation is to use a sign up to 54x72 in terms of dimensions.

Now this pole has a breakaway unit in case there is a knockdown. And speaking of which, maintenance, MTC

will continue to maintain these signs. If there is a knockdown or if there is general maintenance there will be a provision in our call box maintenance provider to continue to maintain these signs here.

Here is another example of the sign superimposed on a Los Angeles "Travel Info Call 511" sign. Here is another one. And a final one.

So my last slide here, I think we'll have to rely on the printouts. I leave you here with the text that we recommend amending to 2I.10. The text in black refers to the "Travel Info Call 511" sign that currently exists in the MUTCD and the text in red is what we recommend adding to the section.

On the right depicts the added sign next to the "Travel Info Call 511" sign and next to it is the "Freeway Assist Call 511" sign, which we are recommending calling SG-49B.

In summary, the text in red essentially mirrors the text in black with the exception of the fact that we will change the service name from "Travel Info" to "Freeway Assist Call 511." And lastly, an allowance for an identification number, or say a call box number or some other way-finding number.

So in summary, we are removing call boxes but we want to keep a lifeline out there for motorists to maintain

safety and to have a way to call 511 for the aid that they need to get on the freeways.

So with that I will leave for any questions that you may have.

COMMITTEE CHAIRMAN ROBINSON: Thank you.

MR. LEONG: Thank you.

COMMITTEE CHAIRMAN ROBINSON: With that I will open the communication up to the Committee. Any questions or comments? Hamid.

COMMITTEE VICE CHAIRMAN BAHADORI: I have just one question. The 511, I assume the phone line itself is live all the time, that's 24/7, right?

MR. LEONG: It is live, yes, 24/7.

COMMITTEE VICE CHAIRMAN BAHADORI: But the Freeway Service Patrol is not full time, right?

MR. LEONG: Freeway Service Patrol operates mainly during commute times, yes.

COMMITTEE VICE CHAIRMAN BAHADORI: During the commute hours. Because the way that it operates, usually from the call boxes now. When people call the first question the operator asks is, are you a AAA member? And if they say yes they route the call directly to our dispatch center, they don't follow-up anymore. They just send it to our dispatch center and then our operators handle it like any other call.

So this is -- the only question that I asked you last time was when you say "freeway assist call 511" it may leave the impression that the towing is available full time.

MR. LEONG: Yes.

COMMITTEE VICE CHAIRMAN BAHADORI: Which is not true.

MR. LEONG: For the Bay Area our dispatchers will have a list or a schedule of what services are available. And if it does fall within FSP hours they will, in some cases, dispatch FSP. But in most cases FSP, there is a -- FSP is roving during the commute hours so oftentimes during those times FSP will reach the stranded motorist first. But if it is beyond, if it is beyond commute hours, whatever other available service there is, AAA --

COMMITTEE VICE CHAIRMAN BAHADORI: Either they send it to us or they go to the rotational program that --

MR. LEONG: The rotational, yes.

COMMITTEE CHAIRMAN ROBINSON: Thank you. Other questions or comments?

Seeing none we will open the communication out to the public. Is there anyone? Please come up and -- come on up.

MR. PALUMBO: Good morning. My name is Maurice Palumbo, I work with the Golden Gate Bridge in San Francisco. But I am primarily, like John, on the National

Committee of Uniform Traffic Control Devices.

So my question was, the image that had the two logos. Oh, thank you. The logo on the left is a national symbol, whereas the 511 logo on the right, as I think you pointed out, is a Bay Area symbol. So is the proposal to amend the California MUTCD with the Bay Area symbol or is it just the national symbol and then where you happen to be you have that flexibility to use what's appropriate in your jurisdiction? That was my question, thank you.

MR. LEONG: Thanks for the question. I believe in the text it describes the ability for the local transportation agency to use their local 511 logo.

COMMITTEE CHAIRMAN ROBINSON: Okay, so for clarification, this would be for modification to the California MUTCD.

Okay, any other questions or comments?

Then we'll bring it back to the Committee. If there are no additional questions/comments I would entertain a motion.

COMMITTEE MEMBER MARSHALL: Mr. Chairman, I will move approval of this item as recommended.

COMMITTEE CHAIRMAN ROBINSON: Thank you.

COMMITTEE MEMBER MARSHALL: As presented.

24 COMMITTEE CHAIRMAN ROBINSON: Motion made by Rick.

Do we have a second?

COMMITTEE MEMBER GREENWOOD: I'll second. 1 2 COMMITTEE CHAIRMAN ROBINSON: Second, Mark 3 Greenwood. 4 Any additional comment or questions? 5 Then I'll ask for the vote. All in favor of 6 approving this modification indicate by saying aye. 7 (Ayes.) 8 COMMITTEE CHAIRMAN ROBINSON: Any in opposition? 9 Hearing none this motion passes unanimously, thank 10 you. 11 Okay, the next item on our agenda is a proposal to amend Section 3F.04, which was submitted by Caltrans. 12 13 Janice, I think you have a comment on this. COMMITTEE MEMBER BENTON: Yes. This item came to 14 us from Mr. Bill Winters. For Section 3F.04 there is a 15 16 specific section in the standard, and this is a standard under the California portion that requires -- that requires 17 18 the nighttime inspection to ensure that there are no 19 confusing or misleading delineators. It is under the 20 Guidance section. 21

And just the history of this particular language was carried forward from the traffic manual so it's several years back.

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And so there has been a recommendation to remove that particular guidance statement.

We queried our district folks and confirmed that not in all cases that we do a nighttime inspection following the placement of the delineators.

So we are supporting the recommendation, carrying this forward to amend the traffic manual, the language in the manual.

COMMITTEE CHAIRMAN ROBINSON: Thank you, Janice.

Bill, I know you were the proponent for this, would you like to come up and speak to it?

ALTERNATE COMMITTEE MEMBER WINTER: Good morning, Committee, and thank you, Janice, for bringing this item forward.

Besides just pointing out what was mentioned about the nighttime inspection you will note that on page 13 of the Revised Agenda the other change being made here is to delete the standard statement about placing them on state highways, as well as a guidance statement saying that they should be placed on all city and county roads.

I think, as the Committee knows, there has been an effort to collapse those kind of statements and just apply them uniformly to any public road. And certainly allowing engineering judgment to come in. I believe there is sufficient guidance in the standard language elsewhere in this particular part of the manual.

And as far as the inspection goes, if there is any

concern with that, there is other language in the manual about maintenance of your markings and a delineator is a type of marking. So it seemed logical to just use the default language as far as the maintenance goes that is already contained elsewhere in the manual.

There is proposed rulemaking and there is a -that hasn't been finalized. There is a placeholder in the
manual today for retro-reflectivity of markings that
eventually it is anticipated that a federal standard would
be created for retro-reflectivity of all markings. SO my
expectation would be that at that time that the rulemaking
is perfected that some language would be in it to deal with
delineators since, again, it is just another type of
marking. And that is all I really have on that. Thank you.

COMMITTEE CHAIRMAN ROBINSON: Thank you, Bill.

Okay, we will open this up to the Committee. Are there questions or comments relative to the item?

Seeing and hearing none we will open to the audience. Are there questions or comments from the public?

We are making this too easy. This is very, very easy.

Seeing none from the public we will bring it back to the Committee. if there are no additional questions or comments I would entertain a motion.

COMMITTEE VICE CHAIRMAN BAHADORI: If it makes

sense it makes sense. I make the motion to pass the item as proposed.

COMMITTEE CHAIRMAN ROBINSON: Thank you, Hamid.

4 COMMITTEE VICE CHAIRMAN BAHADORI: I'll second the 5 motion.

COMMITTEE VICE CHAIRMAN BAHADORI: And Janice seconds for approval of the changes.

And I have to agree that these changes make it easier for local agencies to understand what they can do on their own roads. Elimination of the state highways-type wording eliminates the possibility of local agencies from being confused and missing out on an opportunity to use these types of signs.

So we have a motion to approve and a second. All in favor say aye?

(Ayes.)

17 COMMITTEE CHAIRMAN ROBINSON: And opposed?

This motion carries unanimously.

We are going to move down now into our requests for experimentation. We have a request to experiment with bike boxes submitted by National City and this was introduced by Mark Greenwood. Is there anyone from National City here?

COMMITTEE MEMBER GREENWOOD: I don't believe so.

25 And I have reached out to them in various ways on numerous

occasions and have never made contact with National City so

I believe we should table this item permanently and not reagendize it until we can make contact to discuss it.

COMMITTEE CHAIRMAN ROBINSON: Okay, Mark. Since this is your item you can certainly do that and we will -- since there is no one here to speak to it -- John.

COMMITTEE MEMBER CICCARELLI: Mr. Chair, I read the request to experiment and I have some suggestions for National City to consider, friendly amendment stuff, and specific guidance to create a robust experiment.

How would be -- what would be best procedure for me to do that, given that Mr. Greenwood has suggested that we table?

COMMITTEE CHAIRMAN ROBINSON: I think if you would communicate your thoughts and opinions with Mark on that, that would probably be appropriate.

COMMITTEE MEMBER CICCARELLI: Okay.

COMMITTEE CHAIRMAN ROBINSON: And Mark will probably continue to try to get with National City and then he could -- he could carry those comments to them.

COMMITTEE MEMBER CICCARELLI: I am interested also in my role as a member of the national committee, bicycle technical committee. Bike boxes were brought forward as a proposal in our June meeting just concluded and it passed the Committee, in a slightly stripped-down version compared

to what National City is proposing, which is pretty much straight out of a manual called the NACTO Urban Bikeway Design Guide.

So I would be very interested in National City's experiment illuminating which elements of the bike box, which is not a single thing, it's several pieces acting together, are effective in affecting bicyclist and motorist behavior. And it seems like any experiment that we have coming before us in California would be an opportunity to hopefully shine some light on exactly which part of it is affected.

COMMITTEE CHAIRMAN ROBINSON: Agree. And we need to start working on as much uniformity as possible. This is one that appeared to be a little bit -- a little bit different.

COMMITTEE MEMBER CICCARELLI: It looks like it's on its way to some sort of National MUTCD status, probably at the next rulemaking, so anything we can do between now and then would be helpful.

20 COMMITTEE CHAIRMAN ROBINSON: Thank you, John.
21 Larry?

COMMITTEE MEMBER PATTERSON: If it's not -- again, I'm new so I am not sure if this is normal procedure. But in that communication with Mark it would be nice if we were copied on that just so the other committee members are aware

of what recommendations were made so if it does come forward we have that information.

COMMITTEE CHAIRMAN ROBINSON: That would be good.

Mark, would you please --

COMMITTEE MEMBER GREENWOOD: Sure.

COMMITTEE CHAIRMAN ROBINSON: -- go ahead and let us know, once you have made contact. And indicate what John's comments were as well. Thank you.

Okay, so Item 13-07 has been tabled for now.

And Item 11-04 is one that we are going to -- I understand we are going to pull it, we are going to defer it into the next meeting.

Devinder, do you have any comment on that one?

COMMITTEE SECRETARY SINGH: Sam, he said he cannot attend the meeting so he will attend the meeting in Southern California so we will put it on the agenda next meeting.

COMMITTEE CHAIRMAN ROBINSON: So there is no one here to speak to that one?

COMMITTEE SECRETARY SINGH: No.

COMMITTEE CHAIRMAN ROBINSON: We will pull this and it will be deferred into the next meeting.

The next item on the agenda is an Amendment to Item 12-19, Highlighted Shared Lane Marking. This is submitted by the City of Los Angeles and I think I see Zaki out here.

By the way, Zaki, you came in a little bit late after introductions. Zaki Mustafa is our International President of Institute of Transportation Engineers. Zaki.

MR. MUSTAFA: Thank you very much. Good morning. Congratulations on your retirement.

COMMITTEE CHAIRMAN ROBINSON: Thank you.

MR. MUSTAFA: It must be a good feeling. I can't wait.

I would like to thank the Committee for accepting this proposal at the very, very last minute. I mean, it was really poor planning in a lot of ways but there was something that I could not control. This is something that has been going on for about a year now.

We started this green bike lane experimental project on our Spring Street last year in June of -- or May of 2012 and it went from Cesar Chavez all the way to Ninth Street. There was going to be a press conference held and a big deal about this and it is a big deal for the city.

We went ahead, painted the street, had our press conference, but within a month the paint went away. I mean, it disappeared. So lo and behold we said, hey, it could be the weather was not right, you know. It was kind of cloudy and we worked all night because we were working on two streets. We had First Street and also Spring Street, both streets totaled about two miles.

So we got the crew together again and decided, we're going to go out there and repaint this whole thing. So we started on Spring Street, starting on Cesar Chavez, and that day it was sunny, we worked on it in the middle of the day. And we went all the way from Cesar Chavez to Ninth street. We had all our crews out there and it looked fantastic. It was so bright, it was beautiful, just like my Mountain Dew cap. That's where I got the color from. I took my Mountain Dew cap, took it to Home Depot and I go, mimic this. And I said the same thing to Ennis Paint about three years ago. So it came out really nice. But again within a month it went away. It was pathetic. We couldn't blame it on the weather this time.

So I took the guys from the Bureau of Engineering and our field crews out there to look at what is it that we are doing wrong? I mean, we know how to paint our streets, we, have been doing it for years. It's not thermal plastic, it's Home Depot paint, but still it's paint, so what's wrong?

So after looking at the pavement condition we found out that just like at your home -- how many of you have painted? If you don't prepare your surface and you paint something that paint doesn't last, no matter what it is. So it was the surface. The surface was really in sad shape.

But the very first day when I had painted this stretch our bicycle coordinator -- not bicycle coordinator -- pedestrian coordinator. She's blonde and she had an orange dress on and I took her out there and I was taking a picture of her. And I noticed something on that picture, her whole body was green, her hair, the face, the bright orange dress and everything. So that kind of worried me a little bit because that was the are where all the filming was done in the downtown area.

So this time we're going to prepare the surface from Spring Street all the way to Ninth Street by hydroblasting, grinding or B-blasting and then we're going to repaint it, the whole stretch. So we let everyone know in that area. And the filming industry came to us and said, hey, hold it, you can't paint between Third and Ninth because we do all our filming there and we can't take that green out.

Of course there was a lot of articles and blogs about, it's easy to take the green paint out. I mean, in the computer age you can do anything. But I realized what they were saying because you can't really take the reflection off. You can take the actual color off but it's really hard to take away that reflection that's getting on the vehicle or the people that are standing on the paint. So we worked with the mayor's office and we said, all right,

we are not going to do anything between Third and Ninth; that was last year.

So we went ahead and prepared the surface between Cesar Chavez and Third Street. I used seven different materials, including the Home Depot paint which is only about 9 cents a square foot, and the stain, and as of yesterday, I'm sure it's there today, all seven different types of material are still intact. So that tells you right there preparation was a key.

So now about a month and a half ago, about two months ago, the community, the bicycle advocate and the film industry wanted us to do something between Third and Ninth, which we haven't touched. And you still have a little bit of green out there and it looks really bad. So we have been meeting back and forth with them along with the film industry and tried to come up with a compromise. The film industry really did not want us to paint the solid green, the bicyclist community wanted the solid green. The film industry wanted the dark, dark green, the bicycle community wanted my Mountain Dew green, I wanted my Mountain Dew green.

So we really got the Council office involved with it and we worked with them for almost a month and then we came up with this compromise on the right. Basically all of the conflict zones and the area where we are going to be

putting in a right turn only rule have the solid green but everywhere else it will be two four-inches of green stripe.

Now this will save the city a tremendous amount of resources and money and it will be a lot easier to maintain. And the film industry is okay with it. We are going with a different, a little darker green but the most important part of it, we are still getting our retro-reflectivity. And I feel retro-reflectivity is very, very important. The coefficient of friction is something also that is very important to me. And I tested the material that we are going to be using and it does have the minimum coefficient of friction that is required, .06, that we are looking for.

So basically we are asking for your approval in this little deviation, minor deviation from solid green to two four-inches of green. Basically meeting the needs of the community. And that's what we should be doing, really, looking and listening to what they are asking for and trying to work with them to come up with a solution for everyone.

Thank you everyone for your time.

COMMITTEE CHAIRMAN ROBINSON: Thank you, Zaki.

Okay, we'll bring it to --

COMMITTEE VICE CHAIRMAN BAHADORI: Mr. Mustafa?

COMMITTEE CHAIRMAN ROBINSON: A question from

24 Hamid?

COMMITTEE VICE CHAIRMAN BAHADORI: Yes, just one

question. So this deviation is only for this specific location in the City of Los Angeles or it will be allowed anywhere?

MR. MUSTAFA: Well, I'm glad you brought that up.

COMMITTEE VICE CHAIRMAN BAHADORI: I mean, is your request -- is your request for deviation from the project or an amendment to the experimentation process?

MR. MUSTAFA: I would like to see if we can use it everywhere else. But what I would like to do is, try to use the fluorescent green, the brighter green everywhere else. But, you know, you have to see where the community is -- I mean, we have requests from other communities that want the solid green but the maintenance is a nightmare. That's a big issue. I mean, you're looking at a cost of almost \$10 to \$11 per square foot when you're doing solid green, that's a lot of money. I'm asking for everywhere.

COMMITTEE VICE CHAIRMAN BAHADORI: So this will be your proposed lanes on the right, that will be the new allowed design for any bicycle lane in California, right?

MR. MUSTAFA: Well, in our city.

COMMITTEE VICE CHAIRMAN BAHADORI: Not in your city. When we put in MUTCD --

MR. MUSTAFA: Right, right, everyone.

24 COMMITTEE VICE CHAIRMAN BAHADORI: -- it's

25 everywhere in California.

MR. MUSTAFA: Right, right, right, right, correct. 1 2 COMMITTEE MEMBER BENTON: For clarification, is this item still under experimentation so it's not --3 4 COMMITTEE VICE CHAIRMAN BAHADORI: That is true. 5 COMMITTEE MEMBER BENTON: -- it's not part of the manual at this point. 6 7 COMMITTEE VICE CHAIRMAN BAHADORI: But if he -but if he --8 9 COMMITTEE CHAIRMAN ROBINSON: One at a time, 10 please. 11 COMMITTEE VICE CHAIRMAN BAHADORI: 12 COMMITTEE CHAIRMAN ROBINSON: Janice. 13 COMMITTEE MEMBER BENTON: So it is not part of the 14 manual at this point, it's approved for experimentation. 15 COMMITTEE VICE CHAIRMAN BAHADORI: So if he --16 MR. MUSTAFA: So this --17 COMMITTEE VICE CHAIRMAN BAHADORI: You are 18 requesting to amend your own experimentation. 19 MR. MUSTAFA: Correct. 20 COMMITTEE VICE CHAIRMAN BAHADORI: Okay. 21 COMMITTEE CHAIRMAN ROBINSON: So this is an 22 experiment and there will be criteria that this 23 implementation will be measured against; am I correct? 24 MR. MUSTAFA: Correct. 25 COMMITTEE CHAIRMAN ROBINSON: Okay. And it will

probably be good -- I'd be interested in knowing what those criteria are. I know we've got a couple of other questions but can you go into any detail on the type of criteria that you are going to be comparing this implementation with?

MR. MUSTAFA: Well, we do have -- we are in the process of getting a consultant on board to see the usage and has the usage increased. And we are actually going to be surveying or taking to the bicyclists themselves to see which one they feel more comfortable in using.

Also, you know, where we have the solid green, I see vehicles going through it all the time. And we need to do some study to see how are we setting the behavioral pattern for the drivers, both the bicyclists and also the vehicles out there and do counts to see, is there any usage increase in the bike lanes.

I am thinking about taking that, the four-inch line on Vermont. Vermont we have a bike lane already and we do have counts right now for as to the number of bicyclists out there. And I do want to try that on Vermont as well.

COMMITTEE CHAIRMAN ROBINSON: John, I saw your hand first.

COMMITTEE MEMBER CICCARELLI: Yeah. I'm curious why this needs to be experimented with at all? And I -This is actually a question for Caltrans. FHWA issued
Interim Approval Memo 14 a couple of years ago which allowed

the use of green pavement color to enhance the white pavement markings that are part of the bike lane scheme, only where the white was present. So for example, on the right hand diagram, the proposed lanes, anywhere that longitudinal white is present, green could be applied under FHWA interim approval. FHWA didn't really specify that the green had to be solid between the white lines.

MR. MUSTAFA: Right.

COMMITTEE MEMBER CICCARELLI: So it seems to me that Los Angeles' modification to use longitudinal green with their pavement in-between the left and right side bike lanes still follows interim approval. So I don't see any element here that really needs experimentation.

That is my first question for Zaki is, what aspect of this needs experimentation? But really before asking that question I need to ask Caltrans whether Caltrans, and I don't know the history on this, the way interim approval works is that it is a memo from FHWA offering local agencies and/or states to allow the use of a treatment, a traffic control device, within their jurisdiction simply by applying to do so with Federal Highway.

And earlier interim approval on rapid-flashing beacons, Caltrans took the step after it was satisfied that there were multiple sources, vendor sources, of a blanket approval statewide. So my question for Caltrans was, what

is the California status of approval statewide for FHWA's

Interim Approval Memo 14, green pavement color to highlight
bike lanes.

COMMITTEE CHAIRMAN ROBINSON: Janice?

5 COMMITTEE MEMBER BENTON: My understanding is we 6 provided that approval.

COMMITTEE MEMBER CICCARELLI: Okay. I didn't think to ask before that. Since you've give that --

COMMITTEE SECRETARY SINGH: We do have -- we do have statewide blanket approval to use green pavement in the bike lanes.

COMMITTEE MEMBER CICCARELLI: Okay. So the question to Zaki is, what aspects of the treatment require experimentation?

MR. MUSTAFA: In my opinion, none.

COMMITTEE MEMBER CICCARELLI: Okay.

MR. MUSTAFA: Because FHWA does not tell you that you could have it for four feet, three feet or one feet. It says green --

COMMITTEE MEMBER CICCARELLI: Right.

MR. MUSTAFA: -- within the white. But I wanted to come visit Napa and see you.

(Laughter.)

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COMMITTEE MEMBER CICCARELLI: I wanted to -- I wanted to follow up on the design.

COMMITTEE CHAIRMAN ROBINSON: John.

COMMITTEE MEMBER CICCARELLI: I teach professional development classes for Caltrans, LADOT, LA County Metro and some other agencies. And the emerging use of green is interesting to me and there are quite a few different variations on the treatment in the greater Los Angeles area, which is the last place I thought the course for Metro's bike program.

And if I had to distinguish between the predominant ways it is being applied I would say one is more of what I call "solid color," which is within the mid-block area and the storage area, as shown on the left, it's solid and within the transition area between mid-block and storage it's dotted, okay. Dotted is the terminology for what we use in the interrupted area indicating a conflict area. It seems to me like the treatment on the right is just -- it's preserving the use of the green in the conflict area that is the transition area between mid-block and storage. It's minimizing the use of green but still giving a hint of it as a lead-in of the mid-block section and a lead-in of the storage section. Is that a conscious design on LA's part?

MR. MUSTAFA: Yes.

COMMITTEE MEMBER CICCARELLI: Okay, good.

MR. MUSTAFA: The community -- the bicycle community also wanted all the driveways to be solid. B

then again, when we pot it up it looked like the whole block was green.

COMMITTEE MEMBER CICCARELLI: Right.

MR. MUSTAFA: So we had to compromise. I mean, we had meetings with them for hours and hours and days.

COMMITTEE MEMBER CICCARELLI: Okay.

MR. MUSTAFA: And this is the final compromise.

COMMITTEE CHAIRMAN ROBINSON: John, I want to get to Mark. Mark.

10 COMMITTEE MEMBER CICCARELLI: Thanks, that answers 11 my questions.

COMMITTEE MEMBER GREENWOOD: If Zaki and the City of LA are confident and comfortable that what they're doing isn't really an experiment I'd like to thank the City of LA for keeping us apprised of their work here and I think we should discontinue this discussion.

COMMITTEE CHAIRMAN ROBINSON: Thank you.

And my comment would be, I think there is something that can be learned. As I was mentioning before, if we do have some criteria that you can measure against --

MR. MUSTAFA: Right.

COMMITTEE CHAIRMAN ROBINSON: -- perhaps a comparison of what's marked under current lanes versus proposed lanes. Surveys of bicyclists, surveys of motorists' understanding of what these markings mean.

The first thing I thought of was, you don't have any issue with the coefficient of friction --

MR. MUSTAFA: Correct.

COMMITTEE CHAIRMAN ROBINSON: -- on the right hand side --

MR. MUSTAFA: That's right.

COMMITTEE CHAIRMAN ROBINSON: -- versus on the left hand side. So those kinds of things I think could be measured and some valuable information could be gleaned from it if the City would care to go into that.

MR. MUSTAFA: I am going to be doing an experiment on that, a study, especially on the coefficient of friction.

Now this is off-topic. Thermal plastic, the hot tape, over time will get really smooth, versus your two-part epoxy where the corundum is still sticking up.

Next Wednesday before we go to Boston for our ITE annual meeting, those of you who are attending, we are going to be doing an experiment and getting the readings on this material.

COMMITTEE CHAIRMAN ROBINSON: John.

COMMITTEE MEMBER CICCARELLI: Yeah. Back to the diagram for just a minute. Actually to the original diagram. Zaki, I am particularly interested in the behavioral effectiveness of the lead-in treatment at the start of the block. So even though because interim approval

is blanket statewide at this point, you don't need to experiment, the little variations that you are doing here are of great interest to me. That would be number one.

And number two, I the driveway treatments. I really think that shedding more light on how that affects behavior at driveways would be a good thing.

MR. MUSTAFA: Okay.

COMMITTEE MEMBER CICCARELLI: Now, the treatment on the left has a buffer.

MR. MUSTAFA: Right.

COMMITTEE MEMBER CICCARELLI: Where the treatment on the right doesn't. And I have to say that comparing buffer markings, which are in a real state of flux right now, how do you buffer a bike lane? LA -- I was confused by LA's buffer markings when I compared them to San Francisco's. I am not playing San Francisco, where I live, against LA, I'm just trying to figure out what -- What confused me was they are so big and so rectangular that I thought they were indicating driveway openings when I first rode and drove a street.

And if you look at San Francisco's equivalent marking, what they do is they use a diagonal stripe, kind of like half of the gore marking, and they use a longitudinal stripe that has a different frequency that is out of sync with the diagonal stripe. So the two markings interact in a

way that leaves it looking permeable but still very, very clear. So if you have a chance while you're up here check out several of the buffered bike lanes in San Francisco such as Alemany Boulevard, Market Street, Laguna Honda.

> MR. MUSTAFA: Okay.

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COMMITTEE MEMBER CICCARELLI: And see what you think.

MR. MUSTAFA: I'll do that.

COMMITTEE MEMBER CICCARELLI: I found that as a traffic control device, that particular buffer marking was confusing to me in terms of reading the street. What is it trying to tell me?

MR. MUSTAFA: I'll do that. Thank you very much 14 for your input.

I like the lead-in. I mean, the lead-in, the bike symbol there. Bang, this is a bike lane. Because right now we don't have that. I mean, I've talked with -- I take a bus every day.

COMMITTEE MEMBER CICCARELLI: Right.

MR. MUSTAFA: And every day on Spring Street the bus that I'm in, it's got different drivers, they're driving in the green lane. I go, what are you doing?

COMMITTEE MEMBER CICCARELLI: Right.

24 MR. MUSTAFA: Why are you driving in this? And 25 they go, what is this? A bike lane. Okay. So, anyway, I think it's going to make a big difference.

COMMITTEE MEMBER CICCARELLI: Presumably you'll be positioning that downstream of the right turn sweep?

MR. MUSTAFA: Yes.

COMMITTEE MEMBER CICCARELLI: Okay, good.

MR. MUSTAFA: Thank you.

COMMITTEE CHAIRMAN ROBINSON: So, Mark, if you're agreeable to it you could remove this as a request for experimentation.

Yes, I'll get to you, I promise I'll get to you.

But that's where we're leading at this point. And ultimately, if it would not be an experiment, we would be -- it would be nice if we got information from you at some point in the future.

MR. MUSTAFA: You will. You will.

COMMITTEE CHAIRMAN ROBINSON: With that I'll open the conversation up to the public and Rock.

MR. MUSTAFA: Thank you again.

MR. MILLER: Rock Miller with Stantec Consulting.

John's diagnosis of this is pretty much identical to mine,

I didn't really feel that there was a need to experiment on
this. I have mentioned that to a few fellow traffic
engineers and there are people out there that disagree
strongly with that finding. It might be beneficial if the
Committee could take some kind of formal action to find that

it, in fact does not require experimentation, that it does appear to be compliant with the existing wording. That would settle the argument, which I think otherwise might exist if you just sort of take it off your docket.

COMMITTEE CHAIRMAN ROBINSON: Thank you. Steve.

MR. PYBURN: Steve Pyburn, Federal Highway
Administration. I agree with Mr. Miller. There was
discussion about what was meant by the interim approval. I
would suggest that LA request clarification from our
headquarters on is it necessary to experiment or not.
Mainly so they can put the experiment question to rest in
the context of what they were thinking with the interim
approval.

COMMITTEE CHAIRMAN ROBINSON: Thank you.

MR. PALUMBO: Good morning, Maurice Palumbo with the Golden Gate Bridge in San Francisco. A little off-topic but related, as John alluded to earlier at the beginning of this discussion.

There is a national effort to reevaluate the entire section regarding colored pavements, green for bikes, reds for busses and purple for toll facilities. So I actually applaud LA, the City of Los Angeles, to look at these experiments and test out how all these various treatments are working out because there are other implications for bus lanes and for toll lanes.

COMMITTEE CHAIRMAN ROBINSON: Thank you.

Anyone else from the public?

Then I will bring the conversation back to the Committee. John.

COMMITTEE MEMBER CICCARELLI: Zaki, I particularly also would be interested in any results relating to the longitudinal green next to the longitudinal white.

And then I wanted just for the public's benefit, although many of you are practitioners, to make it very clear that what we are talking about is the difference between Experimentation with a capital "E" and experimentation with a little "e." As considered before this Committee, a Request To Experiment, RTE, is a formal process for evaluating something that might make its way into the manual. Experimentation absent that consideration is still a good thing if the details of a treatment are in flux in the practice.

For example, the elements of LA's proposed treatment there, the longitudinal green next to longitudinal white, there isn't anything like that. It's allowed by the FHWA's memo but we really don't know about its effectiveness. So to the extent that you want to continue non-MUTCD-related experimentation on it, I feel like it has the potential to inform future MUTCD content, perhaps including option statements and figures. So bring it on.

COMMITTEE CHAIRMAN ROBINSON: Any other comments or questions from the Committee?

Seeing none I would entertain any form of motion that this Committee would have on the item.

COMMITTEE VICE CHAIRMAN BAHADORI: Mr. Chairman, I would like to make a motion that the Committee finds that either the current lanes proposed or the proposed lanes as suggested by the City of LA in their request for experimentation, or already approved under FHWA approval process, and they do not need any further review or approval by this committee.

COMMITTEE CHAIRMAN ROBINSON: Thank you, we have a motion on the floor. Is there a second to that motion?

COMMITTEE MEMBER BROWN: Second.

COMMITTEE CHAIRMAN ROBINSON: There is a motion and a second to make a finding that both of the lane configurations that are shown up on the current display are within the intended parameters of the use of the green bike lanes. John, you were first.

COMMITTEE MEMBER CICCARELLI: A friendly amendment to add the proviso that however we encourage the City of LA to continue to test the effectiveness of various elements of the treatment such that we may be informed for future MUTCD content.

COMMITTEE VICE CHAIRMAN BAHADORI: Absolutely.

COMMITTEE CHAIRMAN ROBINSON: And seconder?

2 COMMITTEE MEMBER BROWN: Second it.

COMMITTEE CHAIRMAN ROBINSON: Larry.

COMMITTEE MEMBER PATTERSON: I just had a question of FHWA, the comment from FHWA. I wonder if the motion needs to recognize that consideration by FHWA about what was intended from their actions on the green pavement usage. It sounded like there as a potential that they might refine their directions.

COMMITTEE CHAIRMAN ROBINSON: I'll leave that to the desires of the Committee. Should we reserve this until we get a clarification from the feds or should we continue with where we're going?

COMMITTEE VICE CHAIRMAN BAHADORI: I think the FHWA rep may be in a better position to share his views.

COMMITTEE CHAIRMAN ROBINSON: Steve, would you mind coming back up.

MR. PYBURN: I apologize, I could not hear the discussion from the back.

COMMITTEE MEMBER PATTERSON: My question was, your comments related to the previous action from FHWA and you were going to review what some of the intent was for the green treatment and whether or not our motion needed to include some either "subject to" or some reservation about that clarification.

MR. PYBURN: Unfortunately, I don't have the interim approval in front of me. But the basis of my comment was that instead of speculating that experimentation may not be required, to just request that clarification from our headquarters. So based on that comment, if you think it's appropriate that this action not go ahead until that clarification be obtained then it would be a conditional approval. Just for the record, we don't have any -- we support the proposal. I don't see anything really that would cause concern, just, does this fit into the terms of the interim approval? Since we don't write that we can't make that determination.

COMMITTEE MEMBER MARSHALL: Can I make a suggestion then, perhaps. That our action be phrased such that we make this finding unless we hear something contrary back. So that if they are in agreement it doesn't have to come back here.

COMMITTEE VICE CHAIRMAN BAHADORI: With that,
Mr. Chairman, what Mr. Marshall was saying is that this
Committee's -- our finding that they don't need request for
experimentation. And we can proceed with that motion as
amended asking for further feedback based on findings of the
effectiveness of material and so on and so forth. If FHWA
disagrees the City of LA can resubmit. But we don't need
to --

COMMITTEE CHAIRMAN ROBINSON: So this is a -- this would be a conditional approval based on an assumption that FHWA is in agreement with our findings. That approval would be rescinded if for some reason FHWA were to make a finding in opposition to our interpretation. Is that agreeable to the Committee?

(Affirmative nods.)

COMMITTEE CHAIRMAN ROBINSON: How about the maker of the motion?

10 COMMITTEE VICE CHAIRMAN BAHADORI: That's the 11 motion.

COMMITTEE CHAIRMAN ROBINSON: And the second?

COMMITTEE MEMBER BROWN: Second.

motion to approve use of both configurations. It is this committee's interpretation that both are allowed under the current documentation. That this is -- it is this Committee's understanding that both configurations are agreeable as they're written. And this approval is subject to FHWA intervention -- interpretation to the negative of what we are discussing. Did I describe that correctly? Pretty much.

COMMITTEE MEMBER CICCARELLI: A minor point of clarification, just knowing how interim approval works.

It's likely if FHWA were to object at all it would not be in

whole, it would be to some element of the treatment. And second of all, I think -- I wonder if our motion should also recognize the fact that Caltrans has stated that it has granted -- applied to FHWA for and been granted blanket statewide approval for the use of the treatment and that is the basis of our motion.

COMMITTEE CHAIRMAN ROBINSON: And Caltrans is in agreement with that?

COMMITTEE SECRETARY SINGH: We already have blanket approval.

COMMITTEE MEMBER BENTON: Correct.

12 COMMITTEE CHAIRMAN ROBINSON: Got it. Larry.

COMMITTEE MEMBER PATTERSON: And this is just another minor clarification. In your restating of the motion you described it as an approval. But I think what we were -- what the motion was is that a finding that approval is not required because of the blanket approval statewide.

COMMITTEE CHAIRMAN ROBINSON: You are absolutely right, I butchered it pretty badly.

(Laughter.)

COMMITTEE MEMBER PATTERSON: It's my first time so I just want to be paying attention.

COMMITTEE CHAIRMAN ROBINSON: Approval is not required, that's correct.

Okay, so is everyone clear on what we are voting

on? If you're not I'm going to ask somebody else to restate it because I didn't do a good job.

Okay, so we'll go ahead and call for the question.

All in favor of the motion indicate by saying aye.

(Ayes.)

COMMITTEE CHAIRMAN ROBINSON: Any opposed say no.

This motion carries unanimously, thank you.

Okay. We're a little better than an hour into our meeting and it's probably a good idea to get up and stretch.

Why don't we take a ten minute break.

(Off the record at 10:08 a.m.)

(On the record at 10:22 a.m.)

COMMITTEE CHAIRMAN ROBINSON: So we'll bring the Committee meeting back to order and we will be introducing a discussion item. This item is 13-08, Minimum Yellow Light Change Interval Timing for Signalized Intersections. And this is introduced by Hamid Bahadori.

COMMITTEE VICE CHAIRMAN BAHADORI: Mr. Chairman, thank you. Colleagues, I hope you don't hate me. I didn't put this on the agenda for some frivolous discussion. We have had these discussions extensively about seven, eight years ago. But I think that there is a need to look at it again for reasons that I will briefly explain.

The whole thing, the issue of the yellow timing came about when we introduced Assembly Bill 1022 back in

2003, which became effective January 2004. As part of that bill -- that bill had four components about the contracts and the paper ticket and stuff like that.

One of the items, one of the four primary items in Assembly bill 1022 was that any intersection that uses a red light camera in California, the yellow timing must comply with the minimum standards established by the State Department of Transportation. And that was because of abuses that we had observed and were well-documented all over California for red light cameras being used as revenue generators rather than as traffic safety improvements, which we support their use for.

But when the cities came to us and they went to Caltrans they said, well, your manual, which was adopted from the previous traffic manual, now the California MUTCD, has a table that it says "approach speed" and for each approach speed it gives a value for minimum yellow timing. But nowhere in the manual it says what is approach speed, so how do we do it?

So we brought it to the committee and we found out that the approach speed was being defined differently, even within the same jurisdiction. Some large cities, they were using approach speed differently at different locations.

Some places they were using 85th percentile, some places they were using posted speed, some places they were using

posted-plus-5, so it was a garden variety of definitions of approach speed.

So we tried to consolidate it and the Committee, I think, and Devinder is going to correct me on this, I think in 2004 or 2006 we brought this -- 2005 I believe.

COMMITTEE SECRETARY SINGH: 2004, 2004.

COMMITTEE VICE CHAIRMAN BAHADORI: 2004, right after AB 1022 became effective.

And it was a long process. We spent about a year. The Committee asked me to form a subcommittee, we formed a subcommittee, I chaired that subcommittee. We expanded the subcommittee for the first time beyond the membership of the devices committee. We invited city traffic engineers. I remember specifically Dave Rosemon from Long Beach was there, we had like people from Al Grover, from Hartzog & Crabill, people who do signal timing for a living. And we went through a process of discussions based on science and engineering and practicality and legal issues and logistics of the inter-department coordinations, all kinds of stuff. And there is a paper that is attached to the agenda on this issue that I wrote summarizing the discussions of that subcommittee.

Not the best and not the most optimum solution but the only pragmatic and practical solution that you could reach in those days was to define approach speed as the

posted speed. All acknowledging that this may not be the best engineering decision, the best technical decision, but for reasons that I have explained in that brief paper it was decided to stay with the posted speed and let's see how things work.

And then, as you all know, we came with an effort to better establish the establishment of posted speed limit on streets, which we had a long discussion and workshops and it took a couple of years to do that. So that one is better fixed now. However, we all know that still the posted speed limit, at times, is probably 6, 7, 8 and so sadly, very rarely, is maybe 9 to 10 miles below the 85th percentile. So when we are using the -- when we are using the posted speed limit for yellow timing of the intersections the majority of the drivers, over 50 percent, might be and area actually traveling at higher speeds than that. And we knew that and we were aware of that.

And then the NCHRP report, Report 731 cane out, which is a very well-researched based on science and engineering and field observations a lot of it, recommending that not posted but 85th be used for yellow timing, for reasons that are technical and are mentioned in the report.

At the same time Assemblyman Nazarian, who is in the audience here, introduced a bill in Sacramento, Assembly Bill 612, which suggests that when you use the manual table

102-D for the intersections that have a red light camera, we add one second to those minimum values. And his intentions were noble, to reduce the abuses of the red light camera for revenue generation.

We, by "we" I mean AAA, the organization I represent, we traditionally have advocated for a single yellow timing methodology in California, period. Based on science and engineering, based on what makes the intersection the safest during that very critical period when we are going from green to red.

However, we supported Assemblyman Nazarian's bill AB 612 because we saw that as a step forward. That even though it does not come up with that improved methodology for yellow timing calculations for all the 36,000-plus signals in California, at least it's a step forward to improve and prevent and minimize the abuses at red light intersection camera -- red light camera intersections, which are only about 420. Imagine, 420 out of 36,000, such a small number. But still we were still abuses. So we supported that bill.

And then Caltrans entered into a discussion with Assemblyman Nazarian's office and us and said, why don't we discuss this where it actually belongs, in the Devices Committee. And have a discussion, have them look at the new evidence, scientific research and CHRP 731 and see what we

can do to maybe address the concerns that the AB 612 is trying to address, which are like minimizing the -- not -- the tickets that are used only for revenue generation, it doesn't have anything to do with traffic safety. And also AAA's concerns and other entities' concerns to improve traffic safety.

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So the question -- I sponsored the item and put it on the agenda. And the question here and I would like to highlight that nobody here is asking to go to a longer yellow. It's just the -- first of all the acknowledgement that what we have today is not supported by the latest research, which is the NCHRP 731. And second is that what can we do to come up with a uniform methodology for all the traffic signals based on science engineering and the best safety interests of the motorists and the bicyclists and pedestrians without Sacramento stepping in, and with all due respect to Mr. Nazarian, legislate engineering issues. Which if the Committee does not address appropriately, looking at the reality and the need, which will be legislated and minute traffic engineering issues will be codified in the state law. Which we have always tried to say that it is best decided through this committee and through Caltrans' director, through either policy directives or amendments to the MUTCD.

Anyway, with that what I would like to suggest,

Mr. Chairman and colleagues, is that if you agree that this issue needs further evaluation -- obviously this is a discussion item, we are not expecting any decisions today. But if you agree that this needs further evaluation after six, seven years, that we think about it. And either through some form of subcommittee again or through discussions by Caltrans and legislators and experts, come back to this Committee soon with recommendations to improve the methodology that we have now. With that I will stop.

COMMITTEE CHAIRMAN ROBINSON: Thanks, Hamid; appreciate how you framed this. And I also appreciate how our legislature has identified us as a tool for helping to clarify this issue and this is -- I agree, this is rightfully where those kinds of things we might be able to add some clarity and help to improve things as we all perceive that there is a problem out there that may need to be fixed.

So with that and in speaking to Assemblyman Nazarian a little bit earlier, you mentioned that there is a possible report or presentation that could be made and I would offer this time to do that if you like. Otherwise we can just begin a discussion of the issues so I'll leave that to your discretion.

ASSEMBLYMAN NAZARIAN: I'll speak after this.

COMMITTEE CHAIRMAN ROBINSON: Fine, fine. Then I

will open the discussion up to our committee. You have heard that we have an Assembly bill that has been proposed and there are issues in it relative to how the yellow time would be calculated and addressed at red light intersections. Do we have comments from the Committee? Bryan.

COMMITTEE MEMBER JONES: I really appreciate the Assemblyman representing the community values and I think that's important and he is saying that something we're doing isn't jibing well with the community and so it necessitates us reviewing that. And if people are getting citations through our red light running camera programs, which some cities in California have brought to enhance safety at those intersections, but now they have been perceived or looked at as a revenue source, either for a private company or for the jurisdiction and an unnecessary taxation of the people, I think when we look at the numbers, creating a law for 420 intersections out of 36,000, it's like addressing an anomaly versus the norm.

However, if we were to work with our law enforcement and say, what is the humanistic component of enforcing red light and they say, well, we look at the red light and we watch the car cross over the stop bar. If they cross over the stop bar after it turns red then we have the right to give them a citation for running a red light at a

traffic signal. And a human cannot look at a light and a car at the same time so they have to look at the light and then they have to turn their head and look at the stop bar, and that takes a certain amount of time.

Now with cameras we have come to the point where technology can work in nanoseconds where humans work in tenths of seconds. And so if we can put in -- instead of making all jurisdictions change yellow times and that's nearly 400 local jurisdictions and all the counties in the state and then the state itself, and creating an unfunded mandate where we have to send all of our staff out to revisit all the signal timings, which could be a pretty onerous process.

What we could do is for the 420 red light running cameras we could just say, you can't write a citation until after .5 seconds of the camera -- of the red light coming on. And in that such a way we are just making that technology act more like a human than an instantaneous technology. And then if we are finding that 80 percent of the citations are written within that .5 seconds, that alleviates the cameras being perceived or looked at as an unfair taxation or, you know, not taking in that humanistic characteristic of enforcement or driver error or driving a little faster than the posted speed limit or the 85th percentile. Because even with the posted speed limit or the

85th percentile there's still 15 percent of the people driving above that speed.

You know, sometimes CHP comes out with an announcement that they have a zero tolerance day. So if the posted speed limit is 65 and you're going 66 they might write you a citation. But they announce those zero tolerance days. Other times they wouldn't stand a chance in a courtroom very much. I know our local enforcement wouldn't stand a chance at all if they write a citation for one mile per hour over the posted speed limit on a residential area or on a street because our traffic commissioners and our traffic judges would just throw that out and they wouldn't defend our local law enforcement.

So our local law enforcement make decisions on, is it 5 miles over the posted speed limit, is it 10 miles over the speed limit, is it 11, is it 15? At what point do they start writing citations for somebody violating a posted speed limit. And if you got pulled over for going 26 in a 25, you'd probably be fairly frustrated. But if you got pulled over for going 35 in a 25, that's a little bit more justifiable.

So I think when we look at this component of red light running cameras. I know in San Diego County, I live in a jurisdiction and work in a jurisdiction that does not and will not have red light running cameras but we have

other jurisdictions in San Diego County that do. And in fact, two or three of those cities have already started removing those programs from their city because of this issue of the citation and the revenue. And it's actually going to a private company rather than a lot of the money coming back to the jurisdiction anyway.

Now we have seen some benefits to safety enhancements of the red light running cameras. But to change how we all do signal timings or -- for a few, seems like an unnecessary regulation. And so it might be easier to regulate the technology that is doing the enforcement rather than -- and then if you make a decision to do that technology then you have to take on that additional onerous to create the technology that can do a delay of .5 seconds after the light turns red.

And that's my thoughts and opinions. I would be really excited to hear what other people have to say. But it seems like a simple solution to an otherwise very -- what could be on the other extreme, a very onerous undertaking by our entire profession.

COMMITTEE CHAIRMAN ROBINSON: So just to clarify, one of the things that you are bringing up is rather than attaching the issue by adding yellow time, you would attack the issue by identifying how far into the red the cameras could be turned on for identification of the violation.

COMMITTEE MEMBER JONES: Right.

COMMITTEE CHAIRMAN ROBINSON: Okay.

COMMITTEE MEMBER JONES: Because as an engineer in my local jurisdiction, if I have a safety issue at an intersection and it is brought to my attention that, wow, we have had five collisions in this intersection that are because of people running red lights or not having enough critical decision time to decide when to stop or when to not stop or my law enforcement tell me about they're writing a bunch of citations, I could go out there and either increase the yellow time or I could increase the red time using engineering judgment to say, this is going to help relieve a safety issue out there.

COMMITTEE CHAIRMAN ROBINSON: Okay.

COMMITTEE MEMBER JONES: And we do do that occasionally where we'll put in all-red time or yellow time increases. We'll round up or we give something like that. And so it allows me to use professional engineering judgment in my jurisdiction for the local issues that are occurring in my jurisdiction.

COMMITTEE VICE CHAIRMAN BAHADORI: Mr. Chairman, if I may just clarify a couple of things that Mr. Jones brought up.

On the issue of mandating any time into red. I am not going to get into that. If we decide to further

evaluate this all those things are going to be discussed in the subcommittee.

The jurisdictions even today on their own are using .2 seconds, but they're using it on their own.

Introducing something into vehicle code that makes it kosher and acceptable to run red within a certain amount of time is going to be completely defying the intent of red light violation, which is a per se, it's not a prima facie infraction. And per ses, there are no exceptions.

And then it's going to open a can of worms. Every single red light ticket that is issued by an officer is going to be challenged also. That hey, such and such intersection has a red light camera and I can be .5 seconds or .7 seconds, whatever, into the red and I am not going to get a ticket, how come I got a ticket with the officer. I was .7 into the red, what's the difference? So I am not even going to get into that.

But primarily, you know, the reason that I thought that the Committee may want to look at it is more importantly not only AB 612 but more importantly is the NCHRP 731, which says that the yellow timing is better optimized if you use the 85th percentile. And if this is the engineering 300 page report that our colleague at the Transportation Research Board, TRB, has put together, that tells us that the way we are doing yellow timing, based on

posted speed limit, that at times anywhere between 5 and 11 miles per hour are below the 85th percentile. That might not be the best way to do our yellow timing.

I am fully cognizant of its practical implications. I am not necessarily suggesting that even if there is a change that we make it mandatory that you have to do it right away. But all jurisdictions at a minimum, I hope, once a year they look at their signals. And those -- in the process of once a year looking at the signals, tweaking maybe a second here or there for yellow timing, may not be such a huge financial burden.

I don't want to get way ahead of myself. All that I am saying is that basically the reason was not only red light cameras, it's more important NCHRP 731. That at least tells us as safety advocates for motorists, maybe the way we are doing yellow timing is not the best way that it can be done.

COMMITTEE CHAIRMAN ROBINSON: Thanks, Hamid.

And Larry, I know that you want to speak. But I did want to -- I did want to point something out for purposes of this discussion. One of the earlier things you mentioned, you questioned the possible use of a half a second into the red for the enforcement. I would remind you that in enforcing a speed limit, if we post a speed using a measured 85th percentile we can use radar. We can still

post a speed limit and enforce it, even though -- but we wouldn't be able to use radar if it wasn't based on an engineering and traffic study.

COMMITTEE VICE CHAIRMAN BAHADORI: Of course.

COMMITTEE CHAIRMAN ROBINSON: So we have two different methods of enforcing speed limits as well. So I would pose that it would -- it could be just as valid to consider the type of enforcement that is proposed by Bryan.

COMMITTEE VICE CHAIRMAN BAHADORI: Of course.

COMMITTEE CHAIRMAN ROBINSON: With that, Larry.

COMMITTEE MEMBER PATTERSON: Thank you, Mr. Chair. Actually, the first thing I wanted to ask is that maybe I missed the history. But the way I am looking at this item and the way I read the manual, it seems to me that, number one, it's establishing minimums and offering an option only to extend the yellow, not to decrease it. And so the initial comments was, with the red light cameras, that they are being set shorter than the minimum. And I, as a

practitioner, I worry about that because there is no

authority, there is no protection in terms of doing that.

So my assumption going in was that the engineering judgment portion using the 85th percentile, which is one of the criteria that can be used, is something that as a practitioner I can use to extend the yellow time, that doesn't allow me to shorten it. So I just want to make sure

I am clear in reading this if that's the case.

And from a practitioner's perspective I -- the formula that is used in Table 4D-102 has been used for a long time in terms of setting detector distances and it was really described as the process to eliminate the dilemma zone, where a driver has to make a decision about whether they have time to stop or not. And that yellow time is set consistent with the elimination of the dilemma zone, which I think makes perfect sense and I think, my understanding, has been supported through the research.

The difference between posted speed and the 85th percentile, in some respects, if you look at how the speed is supposed to be set, there shouldn't be a lot of deviation there with the exception of specific things, schools, senior centers or other things that might adjust the speed. Now that has been narrowed through recent legislation so there is a very limited amount of flexibility we have in terms of setting the speed. So the logic is, you set the speed on the 85th percentile so therefore the posted speed could be used to set the yellow time. But that if for some reason those differ, you have the ability to extend the yellow time using the 85th percentile speed. So that logic holds together for me.

And I would really question trying to extend arbitrarily the yellow time by a second or any other measure

because it undermines the logic that has created these connections. And so I have to think about how it's enforced within the red as an interesting option. But in terms of extending the yellow, that would be something I would be opposed to.

COMMITTEE CHAIRMAN ROBINSON: You are absolutely right in what you are saying and description of the identification of the dilemma zone and how we have used detector setbacks and set yellow time to ensure that the driver can make a safe decision whether or not to proceed or to stop. And it is engineering judgment. Remember that what is in the MUTCD is a minimum and engineering judgment can be used to extend that if there are conditions that the engineer believes would warrant that.

COMMITTEE VICE CHAIRMAN BAHADORI: Mr. Chairman.

COMMITTEE CHAIRMAN ROBINSON: Hamid.

COMMITTEE VICE CHAIRMAN BAHADORI: Mr. Patterson, your suggestion, that would be the best solution for all concerned but the reality on the ground is different. The best solution is that the posted speed limit is as closely established to the 85th percentile as possible. But we all have been doing this for years on many, many, many occasions, more than it should be.

The posted speed limits are controlled, justified and downgraded even when not really necessary for political

reasons, for community pressures. City councils and mayors and the county boards lean on traffic engineers. I have been in those positions, you guys are in those positions today. I serve on many traffic advisory committees, one in the county of San Diego with Mike and his staff, and they are probably the best traffic committee I have seen in the state of California and I have told him many times. And they go through this very clearly and very precisely.

But not every place is like that. I have seen posted speed limits that are at 8, 9, 10 miles below the 85th percentile and all that you see is an engineer signing, there are not conditions not readily apparent. And if you ask the engineer to highlight what are the conditions not readily apparent, he has no clue. He was pressured to lower the speed limit.

In a perfect world your solution is the best solution and I agree with you completely that the posted speed limits shall be as close to the 85th percentile as justified by the prevailing traffic. But the reality on the ground on California highways doesn't support it, sadly. Thank you.

COMMITTEE CHAIRMAN ROBINSON: Mark.

COMMITTEE MEMBER GREENWOOD: You know, the state manual and the national manual are very similar when it comes to yellow change intervals, they are almost identical.

And I would suggest that at the hundreds of thousands of signalized intersections throughout the nation this is apparently adequate. So, you know, I don't think we should go to messing with the yellow change interval at just a regular signalized intersection.

I am taking by Bryan's comments that there are so many signalized intersections where you would have to invest a great deal of work and essentially an unfunded mandate, for cities who haven't done anything wrong, that they are doing their best, they are following the national manual. So I would suggest that most locations are not broken and don't need to be fixed.

Now locations with red light cameras. If a city has the money to invest in red light cameras, and presumably these are at our most dangerous intersections. They are certainly worth a little bit more investment to determine the 85th percentile speed and then apply the NCHRP formula. The manuals refer to the Traffic Control Devices Handbook by ITE, which relies on similar research to the NCHRP. It seems like that is where we should focus, that these red light camera intersections are worthy of a little bit more investment up front. That if they are the most dangerous intersections, taking a speed survey to find the 85th percentile is not too much to invest in those.

So I would like to see us not be looking at every

signalized intersection in the state, rather these special locations that supposedly are our most dangerous.

COMMITTEE CHAIRMAN ROBINSON: Focusing on the red light camera locations.

COMMITTEE MEMBER GREENWOOD: Yes.

COMMITTEE CHAIRMAN ROBINSON: Larry.

COMMITTEE MEMBER PATTERSON: I guess you won't hear me say that speeds are consistently set consistent with the 85th percentile speed. But I would modify that considerably if we are talking about locations where I want to enforce that speed because where I really get constrained is when I have to enforce it, particularly with radar.

So by, you know. I'm looking at it thinking, this is the type of enforcement, not of speed, but of something that is related to the speed where I am required to use either the posted speed or the 85th percentile. But where the 85th percentile is substantially different, I think from an engineering perspective I have the obligation to use the most appropriate. So if for any reason the posted speed has been limited then the 85th percentile seems to make sense.

So I am still working within the language of the manual as it exists. Maybe there would be some appropriate strengthening of it, particularly as it may be specifically referencing intersections that are controlled by or are enforced using red light cameras. I think Mark's suggestion

that we narrow the focus down to those locations which are using the red light cameras, because the formulas do work and they are the way to apply the yellow change interval methodology when you are timing a signal.

So I think it's down to the narrow portion. Maybe the language is just making sure that the amount of flexibility, certainly to go below the minimums, would be clearly stated in the MUTCD. But again, it's a fairly narrow requirement specifically applied to these intersections and it would not include requiring some additional time like a one second additional, it would simply be narrowing down the flexibility that you have at those locations. Much like we do if we are going to enforce the speeds and the relationship to the 85th percentile.

COMMITTEE CHAIRMAN ROBINSON: As I am preparing for discussing this I Googled "yellow times at red light controlled -- at camera controlled intersections" and I was inundated by the number of studies that have been conducted on them. And I read through as many as I possibly could before I got indigestion. But the one thing that I found was missing in each one of these -- and by the way, the vast majority of them concluded that adding yellow time to an intersection reduced the amount of red light running.

But not one of them that I was able to find was able to -- none of them stated that the yellow time was

placed according to the manual. And that's one of the things that concerned me was that there was -- the study was done, it made a conclusion, but it didn't identify that the additional yellow time was over and above what the manual stated needed to be there to begin with. That concerns me a lot that there is potentially a lot of intersections out there that are timed with inadequate yellow time below what the manual requires. But the fact that nobody said that in their study was of great disturbance.

Anyone else? Larry.

COMMITTEE MEMBER PATTERSON: One thing I meant to mention, it's just a quick -- is that at least in my city, for those intersections that are enforced using red light cameras. Now the police department is the one that manages that contract, that's not in public works.

But on an annual basis, this was brought up earlier in one of the suggestions, on an annual basis my department is asked to certify that we are, in fact, conforming to the MUTCD. And that the yellow change intervals in particular and the other timing aspects are set according to the manual. Because of the history, at least in San Mateo County, where there is one city where there were a number of citations that had been thrown out because they had, in fact, set the timing too short.

So we went through the process of saying, let's

verify and certify every year that, in fact, we are complying with the manual in terms of the application of yellow change interval timing for those intersections that are within the -- that are being enforced with red light cameras. I've kind of expanded that. I just want to certify that citywide because I don't want to be deviating anywhere, especially with shorter times anywhere in the city. But the annual certification is helpful.

COMMITTEE VICE CHAIRMAN BAHADORI: Mr. Chairman.

COMMITTEE CHAIRMAN ROBINSON: Hamid.

as we are going just to remind my colleagues' memory. If you haven't had a chance to read that little paper I put together, that that subcommittee that we got into this discussion seven, eight years ago, one of the very first things that everybody int eh subcommittee agreed is that an intersection that has a red light camera is absolutely no different than any other signalized intersection. Just somebody has added a red light camera to that intersection. The functioning of the traffic signal, the humanistic part of it, the human behavior, the driver reaction time, all that stuff is exactly identical.

For that reason from a traffic engineering perspective everybody in the subcommittee -- this was the very first item we agreed on. That just because a city has

decided to put a red light camera at an intersection, it doesn't change the yellow timing requirement for that intersection. You can take that camera out tomorrow and that intersection is going to be exactly as it was yesterday. If the camera is off that day for technical reasons, still the behavior of the human beings and drivers approaching that intersection are going to remain the same. So we all very soon agreed that although a red camera might be the nexus behind the discussion, but the fact of the yellow timing calculation should be based on science, research, as in NCHRP 731, and so on and so forth.

And again for the reasons that I explained, I don't want to rehash it. If you ended up with a posted speed limit. And who knows, you may end up there again even if you decide to further discuss it. But one of the things that I would like, you know, for us to think about is that if in our minds if --

Some jurisdictions, for example City of Anaheim, they just had an ordinance a few years ago, it's a charter city, it's not a general law city, they just had the ordinance that in perpetuity banned the installation of any red light camera anywhere in the city of Anaheim. It doesn't mean that City of Anaheim doesn't have dangerous, so-called dangerous intersections, of course they do, but they just decided not to use cameras. The people of that

city don't want cameras.

So next door, say, the city of -- I don't know who uses. Costa Mesa. Costa Mesa is using red light cameras. It doesn't mean that then yellow timing requirements two blocks away in Costa Mesa are different just because they put a red light camera there. That you have to look at the different methodology, that you have now to look at a different formula. That is the reason that we back in '04, '05, whenever we had those discussions, very soon said, let's not distinguish between the camera intersections and non-camera. That's just want I wanted to kind of remind everyone of that discussion. Nobody was on the Committee then so I just wanted to share that.

COMMITTEE CHAIRMAN ROBINSON: If there are no further comments from the Committee I think it will be a good time to open the discussion up to the public. So if you have an opinion and would like to be heard this is your opportunity. Yes, sir.

MR. BEEBER: I'm here -- I was invited to speak.

Is this the time that you're inviting me to speak to give my

PowerPoint or --

COMMITTEE CHAIRMAN ROBINSON: It's your choice. You can do it now, you can wait, but it's open to you.

MR. BEEBER: Whenever the committee feels -COMMITTEE CHAIRMAN ROBINSON: Then let' see it.

MR. BEEBER: Okay, thank you.

COMMITTEE CHAIRMAN ROBINSON: Thank you.

MR. BEEBER: Thank you very much. My name is Jay Beeber, I am the Executive Director of Safer Streets LA. I want to thank the Committee for inviting me here to speak today and give this presentation.

There's a number of things that have been discussed here so far and interestingly enough I am going to cover a lot of what you have commented on. I am just going to kind of get into this. I will be trying to get through this as quickly as possible so if anybody wants me to slow down and stop on something please just let me know, that way we can back to something if you want.

This question is really about the question of reducing red light running violations and collisions through a longer amber signal phase. Just to give you a little bit about my background, I am the Executive Director of Safer Streets LA, I am a research with the Reason Foundation, I am a member of the ITE -- thank you to Zaki Mustafa who recommended that I apply. There were -- I have done numerous studies on traffic safety and what happens when you change yellow timing and that sort of thing. I am a member of the Los Angeles Pedestrian Advisory Committee and I graduated with Honors from the University of Michigan. I have received a number of awards, I won't go into those.

So the question is, do longer yellow signal times reduce red light running? The answer is an unqualified yes.

And I appreciate the Chair's comments on the -- on the studies that he saw on this. But I will take exception to one of the things that he said which was that there were no studies that used -- that started with the ITE minimum.

And there are a number of studies that actually have. In fact, one of the major studies, which is the Texas DOT-TTI, Texas Transportation Institute studies, they did a number of measurements and their baseline was the -- was the calculated minimum, the IT calculated minimum. And I have spoken to the author of that and have provided you with a number of his comments. I asked him that specific question because that has come up and he said yes, the baseline was the ITE minimums were what was calculated to be appropriate according to that formula and we found that there was an additional benefit going beyond that. But I'll show you actually some examples of that.

There's a couple of other studies, Van der Horst and Wilmink in 1986 found a 50 percent decrease in red light running and Retting also found a 36 percent decrease in red light running where the yellow interval was increased by one second.

Okay, so this is from the Texas Transportation

Institute study. You can see that it says the factor is a

yellow interval duration and you can see that in the first set of columns that if you -- if the yellow time was about a second under what the ITE said, there was about a 110 percent increase in red light running. When the one second -- when it was one second above it was about 53 percent reduction. And again, Dr. Karl Zimmerman has confirmed that that is exactly what that means, it's above what the calculated amount was from the ITE formula.

This is another example of a chart of -- and I am going to figure out where the pointer is. Here we go, okay. So if you can see the zero/zero here, is the ITE minimum. Okay? It says "observed minus computed." The computed is the ITE, computed using their formula. And as you can see that's the zero/zero in this chart. You can see there is still a reduction when you go above that.

The same thing with this chart. Again the zero/ zero is over here and you can see the trend line keeps going down.

This is crashes. So there has been a question, well, you can reduce red light running but do you reduce crashes? Of course the answer is "yes" according to this study as well. You can see it is not quite as dramatic but there is still a reduction below once you go above the ITE minimum. And again Dr. Zimmerman has confirmed these results. I won't get into the exact question and answer but

basically each of these questions was as to whether it was the ITE formula that was used to calculate. He said yes and he said he confirmed that. All of this was in a PDF that we sent to you, if you haven't received that we'll make sure that you get it. But you can read his responses and also a longer response between he and I in terms of this.

And again, these were -- I'm going to go through it real quick and just -- these are -- each of those figures that I just showed you, some of the figure numbers are a little bit different because they had different reports and they just numbered the figures differently but they are basically the same figures.

FHWA has certain recommended practices and to improve signal timing is one of them that traffic engineers make sure the yellow change is set properly. The question is, what exactly is that? But again, here his research shows the yellow interval duration is a significant factor. When the intervals are set too short it's likely to be a higher incident of red light running. And when they're higher, obviously that's -- if the approach speed is not known the speed limit plus 10 miles per hour is recommended. That is FHWA-recommended practice. So it's important to note that there is that.

There's also other factors that we haven't talked about yet, which is a question of higher vehicle -- sorry --

larger vehicle traffic and things of that nature or a population of older drivers or people with longer reaction times, I'll get into that in a few moments. And I'm just going to keep going from here, okay.

So studies from red light camera locations, and we have done a number of them, have shown a significant reduction of red light running when the yellow times have been increased. Okay.

This is an intersection at Mission Boulevard at Mohave Drive in Fremont, California. Now the minimum yellow time is 4.3 seconds. That is computed based on a 45 mile posted speed limit. That the is exact number that you get when you use the ITE formula. And you can see that there were a large number -- as you can see in here, this is how many violations were occurring on a monthly basis before at the -- at the ITE minimum.

COMMITTEE MEMBER JONES: How many of those violations resulted in a collision?

MR. BEEBER: I don't know, probably not very many.

COMMITTEE MEMBER JONES: Okay.

MR. BEEBER: There were all fraction of a second.

These are almost all fraction of a second violations.

These are all up to about a second.

When Caltrans was asked to come out to take a look at this intersection they came out there, their engineer

came out and he said, we should change the yellow light time and increase it by seven-tenths of a second. So again, that's above the ITE minimum. And you can see what occurred is that immediately, this is a half a month right here of the change, you can see immediately that the red light running was reduced significantly and has held over two years. So there was no rebound, there was no change back. It has been consistent and it stayed. That reduction is an 80 percent reduction on average, Took the average of these and the average of these and you get an 80 percent reduction.

At this intersection at Citrus Avenue in Redlands they had a posted speed limit of 25 miles per hour, their yellow light time was set at the MUTCD minimum in California of 3 seconds. You can see they increased it to 3.9 so almost a full second and you can see, again, the reduction in red light running. They had a lot of red light running to start with and then afterwards it was reduced. And again, it stayed down over these months; they eventually pulled out the red light camera so there was no more data.

COMMITTEE MEMBER PATTERSON: Could I ask a question on that?

MR. BEEBER: Sure, absolutely.

COMMITTEE MEMBER PATTERSON: So you mentioned the posted speed was the 85th percentile speed checked?

MR. BEEBER: I don't know, I just know that they 1 2 increased the yellow light time. 3 MR. PYBURN: So it could have been a higher speed. 4 MR. BEEBER: It could have been. That probably 5 was a factor in terms of why just using the posted speed is 6 not sufficient. This is a perfect example, because the 85th 7 may have been higher, there may have been other factors why 8 people were running the red light as well. 9 COMMITTEE VICE CHAIRMAN BAHADORI: Can I ask a question, Mr. Chairman? 10 11 COMMITTEE CHAIRMAN ROBINSON: Please. 12 COMMITTEE VICE CHAIRMAN BAHADORI: On the Mission 13 Boulevard you said that the increase was only from 4.3 --14 was only .7 seconds? 15 MR. BEEBER: Right, seven-tenths. 16 COMMITTEE VICE CHAIRMAN BAHADORI: Seven-tenths. 17 MR. BEEBER: Right. 18 COMMITTEE VICE CHAIRMAN BAHADORI: That's a second 19 -- by seven-tenths of a second over a period of two years 20 you cut the red light running practically in half. 21 MR. BEEBER: Eighty percent. 22 COMMITTEE VICE CHAIRMAN BAHADORI: Eighty percent. 23 MR. BEEBER: More than half. COMMITTEE VICE CHAIRMAN BAHADORI: Eighty percent. 24 25 MR. BEEBER: And if they went up to one second

they would have gotten more than 80 percent.

COMMITTEE VICE CHAIRMAN BAHADORI: And we know -instantly we know that the higher number of red light
running the higher changes of a red light accident.

MR. BEEBER: Exactly.

COMMITTEE VICE CHAIRMAN BAHADORI: In this case what was the change? How much did --

MR. BEEBER: That was almost a full second, I think they went from 3 to 3.9. Again, I have no idea why they picked these numbers, that's kind of lost to history.

COMMITTEE VICE CHAIRMAN BAHADORI: We went from 3 seconds to 3.9 seconds and we cut the accidents by almost two-thirds.

MR. BEEBER: Right.

COMMITTEE VICE CHAIRMAN BAHADORI: I mean -- not the accidents, the red light running.

MR. BEEBER: I can't read it from here, it's 88 percent, I believe.

COMMITTEE VICE CHAIRMAN BAHADORI: The red light running was cut by 88 percent.

MR. BEEBER: And the reason is because the red light running, as you extend it out you get -- the first increment you get the largest decrease in red light running because the -- I'll show you a chart of this, exactly what it looks like in terms of late into the red. But it's like

a hockey stick and it; s very, very high in the first few fractions of a second and then kind of goes down gradually. You get to about one second you are almost at nothing and then it kind of trails off after that.

COMMITTEE VICE CHAIRMAN BAHADORI: And back in 2004/2005 we did not have these statistics, we did not have --

MR. BEEBER: That's correct.

COMMITTEE VICE CHAIRMAN BAHADORI: -- the technology to measure how significant a .5 or .7 second changes the number of red light running.

MR. BEEBER: Right. And one of the benefits, if I may, I hope I don't make anybody's head explode, about two red light cameras is that they will tell you where you have a problem in terms of your yellow light timing. They will tell -- if you look at the statistics and say, there's a whole lot of people still running the red, I've got 200, 300 a month, your yellow light timing is off. I mean -- so, I mean, they can tell you exactly where you have a problem.

This is one of the reasons -- and I'll let, obviously, the Assembly Member speak for himself, but one of the reasons why I believe he focused on these, which is these are the locations where you can look at the data and you can see there is a problem. You want to measure them at other locations with some technology I'm sure you'll find

some other intersections as well that have the same -- have the same problem. Okay.

Again, this was in Loma Linda. As you can see, Loma Linda actually changed their time twice. They had under-time by .3 of a second over here, they were 45 mile an hour. They were .3 of a second over here. And you can see they had a large number of red light runners to start with, okay. They increased by only .3 of a second and because they realized that they were under time based on the law. And so what you get is over here. Again, this is -- 142 is a half a month and so you get a new average down here. This is when it was at the ITE minimum.

They increased on the mayor's authority, pretty much for no other reason than the TTI study from Texas. He said, I think we can do better than that, I think we can reduce red light running even more. And he asked for an additional increase in the yellow light time, arbitrarily or however you want to call it, by one second. And you can see the red light running was eliminated almost completely here. And you can see there is incremental decreases. I believe the first change was at around 60 percent and I believe the second change for the additional second was around a 93 percent difference.

COMMITTEE VICE CHAIRMAN BAHADORI: Mr. Chairman, may I just ask one question?

COMMITTEE CHAIRMAN ROBINSON: I have a question first and then Hamid.

COMMITTEE VICE CHAIRMAN BAHADORI: Sure. No, no, of course.

COMMITTEE CHAIRMAN ROBINSON: We're discussing the changes in the yellow and the change in -- affecting red light running. Do you have data that identify the effect on accidents as well?

MR. BEEBER: I do.

COMMITTEE CHAIRMAN ROBINSON: I would suggest that we -- we are keenly interested in safety in these locations, you know, I mean, obviously I have my opinion. But, you know, they're identifying where the yellow time is too short for the city. And then instead of the city changing the yellow time they put in a red light camera and ticket a whole bunch of people.

I am just going to scoot through these. These are just locations in Virginia. Again, red light cameras existed, after they changed the yellow time it went down. I'm just going to go through them real quick. Here is another one, a fairly dramatic difference from where the yellow light time was original and then it was increased, I believe, by -- I think that was a half a second, I am not 100 percent sure on that one, but you can just read the chart. It's in your -- it's in your materials and it went

down significantly.

Okay. So your question about where we have collision statistics. This is the part of that that I want to talk about. But first I want to show you. This is a typical timing to red of red light violations. Again, this is from the camera company data. And it shows that at this particular intersection in Oakland in November of 2009, and I'll explain why I picked that month to start with, there was — this is what the pattern is. So as you can see, the red light running kind of trails off after you get over about a second.

And what we found with the studies, and I have it included in this presentation, but if you look at the time into red, what percentage of your violations are occurring within that time period, say it's .5 of a second or .7 of a second, and you increase your yellow time by that amount, that's the amount that your yellow -- that your violations will decrease. It happens every single time.

But let me show you what happened. So in Oakland, on their own authority the Department of Transportation in Oakland had gotten a lot of complaints about the cameras and they said, let's increase the yellow light time by one second. And so at this particular intersection -- and again, these are straight-through, only straight-through violations. There's a whole different pattern if you're

doing rolling right turns and things of that nature. But this is the result the month after they made the one second change, fairly dramatic. One second was added.

COMMITTEE CHAIRMAN ROBINSON: One moment, Mark, Janice had a question.

COMMITTEE MEMBER BENTON: And maybe not this particular one but the previous intersections you were looking at. I know the camera there is helping us collect the data to find what is going on. So before they changed the yellow time intervals, say from 4 to 4.3 or 3 to 3.9, was there -- were the cameras on prior to that? So is there the data before -- more data before that? Meaning, was it because the cameras are up there so everybody is going to not run, or was it truly because the yellow interval was changed and that's why they are not running?

MR. BEEBER: Let me just go back real quick, okay. So in this particular, which is Mission Boulevard, okay, the cameras are on here. The cameras were on for a long time. There's only a limited amount of time that we could ask so we didn't want to burden them with a lot more data. But if you go back in history and you just look at the charts and whatnot, it just continues all the way back.

COMMITTEE MEMBER BENTON: Okay, so the cameras were on.

MR. BEEBER: The cameras were on. This is all

camera data. The only way we have this data, for us. We don't have resources to go out and do --

COMMITTEE MEMBER BENTON: Right.

MR. BEEBER: -- our own studies. The cameras are telling us this.

COMMITTEE CHAIRMAN ROBINSON: Mark, you had a question.

COMMITTEE MEMBER GREENWOOD: This location in Oakland where adding a second dramatically decreased the red light running, did the yellow timing conform to the ITE quideline before it was changed?

MR. BEEBER: Yes. In fact, it was actually a little bit above. They actually when they started their program, I believe they went a little bit above. I actually have a chart of that, not in the materials that I have but I can provide it to you if you'd like to see. They have every intersection, the dates they made the change, what change. And some of them they also increased some all-red phases as well. But they were definitely at at least the minimum, I believe slightly above.

What happened in Oakland, and there is a great deal of documentation on this so I am not making this up, okay. What happened was when they made this change the police department in Oakland started sending some memos to the engineers in the city and said, what are you doing?

This is a problem. We need to fix this problem. Your change has now impeded our ability to have -- this is a negative impact on our red light camera program. So less red light running was a negative impact on their red light camera program that was intended to reduce red light running. This is the reason why this is such a major issue. Because unfortunately, and we are not saying it for everybody, sometimes there is a perverse incentive not to do the engineering change because they are afraid that revenue will go down or whatever. And again, I am just going by what the memo said.

Okay. These are collisions, okay. This data is taken by the CHP SWITRS database, okay. So we went back -- the cameras were put in about here but we went back and looked at all the collisions. These are at all of their red light camera locations. So we looked back in history of what happened at those locations before they put the cameras in. These are -- this is the history of -- you can see that they were running about, on an average, about two collisions over there. I think there's about 9 or 11 or so intersections. So about two on average per month, okay.

This is the period of time when they had the longer yellow light time at the red light camera intersections. When they made the change and they decreased

see what happened with the collisions. So your question as 2 3 far as, you know, this is just one place and, you know, 4 could it -- could it be an anomaly? You know, who knows. 5 I'd like to do more studies. But mostly what happens is they make the change and then they hopefully keep it and not 6 7 roll it back. So, you know, we don't see the collisions go 8 back up again. But you can see at least in this instance there is this gap of collisions when they increase the 9 yellow light time by one second. And then unfortunately 10 11 they didn't keep that change and public safety was 12 compromised. 13 COMMITTEE VICE CHAIRMAN BAHADORI: How long was that duration? 14 15 MR. BEEBER: That's about a four month period. 16 Four, four and a half months. COMMITTEE VICE CHAIRMAN BAHADORI: And nothing 17 18 else changed at that --19 MR. BEEBER: Nothing else changed. They just 20 changed -- they rolled the yellow light time back by one

it again under pressure from the police department you can

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second.

22 COMMITTEE MEMBER BROWN: How did --

MR. BEEBER: And again --

24 COMMITTEE MEMBER BROWN: How did the Oakland

25 Police Department justify that?

MR. BEEBER: They said that their yellow light time was too high, it was not conforming to the ITE standards. They kept -- Again, this is the same discussion that we're having here which is, we have to have the same standard everywhere. You have to have the same standard everywhere. So they forced them to have the same standard everywhere. Collisions went back up again.

I will speak to that. I hope I have a few moments to speak to whether we do it everywhere or not. Because right now -- actually I'm going to speak to it now.

There is a patchwork of standards that is being used in the state. Even though the manual has a minimum, okay. And some locations that want to abuse the practice of red light cameras will set their yellow light times at a minimum and will refuse, even under an avalanche of evidence that they could reduce their red light running by increasing their yellow light times, they refuse to do it.

And the city of Fremont is a perfect example of it. There is nobody here from Fremont that I'm going to insult by saying that. But they know that where Caltrans has increased their yellow light times at the Caltrans-controlled intersections in terms of the timing, their red light running -- they have the data, it goes down immediately. They refuse to do it at their own intersections. "We don't need to." That's their answer.

We've gone time and time again and said, look at the data. Caltrans increased at that one intersection in December of -- this past December; they increased it at a second location that they, that they control. And they're doing exactly the right thing. They're going out there, they're saying the yellow light times are not, are not long enough, and they are doing the right thing. The city refuses to make the change at other intersections.

Okay. So the evidence is overwhelming that yellow light time, the longer yellow light time above the ITE minimum or, you know, above maybe something slightly below the IT minimum, is a benefit in terms of safety, in terms of the amount of collisions -- I'm sorry, the amount of red light running that we see. I am not going to read every single one of these but you can see, this is just sort of a list of those.

Now I want to talk about Georgia for a second.

Georgia did exactly what AB 612 proposed to do, which is they had a bill and they said, let's increase by one second at only at our yellow -- at our red light camera intersections. We have a report from Congress and also a letter from the Honorable Senator Barry Loudermilk from Georgia and he tells us that what happened was that violations dropped 72 percent at red light camera intersections and some local governments reported that the

violations dropped as much as 81 percent. And again, there's some documentation that he has provided in addition to this that there was no adverse effects elsewhere because they only did it at the red light camera locations.

Other cities -- we actually went off on this for a second. There is, again, a hodgepodge of what's going on in the state of California. The city of Pasadena, and I just spoke to them this week to confirm this, I didn't have time to get documentation for you but we can certainly get it. The city of Pasadena uses 10 miles above their posted speed limit because they recognize that their posted speed limits are lower than what their 85ths are and they just do it on their own. They had a red light camera program, they have eliminated it. They have increased their yellow light time, they've probably increased their all-reds to some extent. And they have increased safety by doing that and they are rolling this out slowly.

And one of the things that came up in that conversation with their city engineer was that they are making these changes because -- and I am not familiar with this and I'm sure this Committee knows much more about this than I do, that there has been some mandates from the changes in the manual for pedestrian timing and for bicycle timing. And they said, as we are making those changes we are just -- you know, it's not costing us extra, we are just

going out and, you know. It cost us a little extra to do the additional calculations but we're going out there and we are -- we're making the yellow light timing changes, on their own, citywide.

The city of -- the city of West Hollywood is increasing by five miles an hour over the posted speed limit.

The city and county of Sacramento use two different standards. Sacramento uses the 90th percentile, the county, the city uses, I believe, the 85th percentile.

So again, there is just a patchwork. And again, Caltrans obviously has made these changes at intersections that they control in the same city and the same corridor where the yellow light time conforms to the ITE minimum. They have gone beyond that. Apparently they feel that there isn't a problem, to some extent. I cannot speak for anybody but clearly based on that they have a slightly different standard that they are using.

And again here is another table from another study. Whoops, that was backwards. Okay. And again, this is another study that showed -- this is one, they used a slightly different formula, not the ITE formula but I mean the -- they used to get the zero point, they have it as one here. And you can see there has been a reduction. I think this is crashes but I can't read it from here. I forget

which one this is. Crashes, yeah, crash rates, the crash rates. You can see the crash rates went down when they went above the ITE minimum.

COMMITTEE CHAIRMAN ROBINSON: Can you wrap up in about five minutes?

MR. BEEBER: I'll try, okay. I know this is running long, okay.

So again there is a question, do drivers adjust to the longer yellow time. The evidence shows that there isn't adjustment. You can see from the charts that I showed you that there isn't an adaptation over long periods of time. But also the experts tell us this, I am not going to go through all of these.

I did want to talk about the ITE Kinematic Formula for a moment, okay. This is the original formula here, okay. This is California has simplified it so they've dropped the component for the grade approach, so there is no requirement for cities or localities to adjust for the approach grade. And also we are using the posted speed limit s opposed to -- as opposed to the actual approach speed. Okay.

So the original formula came from a study or a paper that was done in 1959 called the Problem of the Amber Light -- the Amber Signal Light in Traffic flow. And they were trying to figure out what number will allow you to

eliminate a Type 1 Dilemma Zone. It was not a question of what is the proper yellow time overall. It was, how do we eliminate the dilemma zone if you know what the approach speed is of a vehicle, if you know what the perception and reaction time is, if you know what their deceleration rate is. If you know those three factors you can eliminate a Type 1 Dilemma Zone. And that is the only thing that this paper did. This was eventually adopted as the way to set yellow light times. And as you can -- hopefully we'll have some time. I can show you why that sometimes does not follow that it's the appropriate thing to do. Okay.

So if -- this is what they were trying to eliminate. If you -- the way that they calculate it was they said, how long does it take a car to stop, okay, assuming that you -- so the critical stopping distance. And they said, you've got to have your yellow light time at least long enough for the vehicle to cross that distance. If you don't there's going to be a section where, in the roadway, the dilemma zone, where you are going to have a place where the driver can't do the right thing. They can't either stop in time or they can't cross the limit line in time. And that's the purpose of this.

So when you do it properly and you know the right numbers you get -- you eliminate the dilemma zone. Okay.

But you have to get the variables correct, okay. You have

to get the right approach speed, you have to get the approach -- the correct driver perception reaction time, you have to get the correct deceleration rate, you have to adjust for the grade. Okay.

So it's made up of two components. There's the stopping distance. I'm going to go through this real quick because you guys all know this stuff. You've got the braking distance, okay, and then you have the distance during which the car travels during the perception reaction time. You put those two things together and this is the formula that tells you what your critical stopping distance is, okay. So that gives you this section of the roadway, that's just the critical stopping, okay. Then you calculate what the minimum yellow time is and that's, again, just distance over your velocity.

Now here is the question. What is the velocity? The ITE formula assumes that the velocity is the approach speed. It may not be because drivers can slow down, they can change their speed while they're crossing that distance. If you assume that no driver ever slows down then you have a yellow light time that eliminates your Type 1 Dilemma Zone. But I have turning lanes and other -- many other instances, drivers slow down. It takes them longer to cross to the -- to the limit line, okay. So let's just back that again, okay.

So, again, we talked about this. California protocols do not address the following questions: What is the actual approach speed? What is the perception reaction time? Is there a downgrade? And what about larger vehicles?

So we are allowing jurisdictions to legally set their yellow signal time at a duration that ensures that some drivers will unintentionally violate the red, which is why when you extend it out you get less red light running.

In the Report 731 there is a question of perception reaction time. They found that the one second that we are currently using is only about 50 percent of drivers. If you want to get to the first standard deviation or about the 85th percent of reaction times -- they measured this at locations where drivers were reacting to the amber light. They found that it's somewhere in here, okay. So it's somewhere around a little bit above 1.3, 1.4 seconds. So perception reaction time is also an important part that this study found. Okay.

COMMITTEE CHAIRMAN ROBINSON: Can you wrap up?

MR. BEEBER: Okay. So the approach speed, real

quick, they found and we talked about this, they found that
the approach speed at locations, including ones in

California, were routinely 5 to 10 miles an hour above the
posted speed limit, the average is 7.5 miles in their study.

They rounded down to 7 miles an hour as a recommendation over the posted. We said, you want to get about 6 seconds, you go to 8 miles per hour. If you add that to the additional 4 seconds for a longer reaction time that gives us one second longer for the yellow time. And that is sort of how the bill, the genesis of the bill. It was not arbitrary. It's that we took these two factors that the studies show us, longer reaction time slightly, higher approach speed, and you get about a second longer than what we're doing currently.

I just want to give a real world example. Let me see if I can do this. I'm not going to do it right now. If anybody wants to hear it I'll just --

There is one other thing. Okay. I just want to talk for a moment about vehicles that slow down on their approach. The problem with the ITE standards -- I'm sorry, the manual standards right now in California is you have a blanket three seconds for a left turn lane, okay. Every expert that I have spoken to has said that that is not the proper way to do that, that you have to know what the approach speed is, you can adjust slightly because you think that -- and the Report 731 says this. You can adjust slightly downward from the posted speed limit but you have to use some version of what the real approach speed is.

But here is the other thing. What we talked about

is that when drivers slow down it takes them longer to cross at that limit line. So I want to give a real world example here. I assumed that a vehicle was traveling at 40 miles an hour, that's 5 miles an hour above the posted speed limit, so that means he has a critical stopping distance of 231 feet. I am going to assume the vehicle is 190 feet from the intersection when the light turns yellow, that's in the double left turn pocket, okay. So he's too close to stop because he's within the 231 feet, okay, so he must also slow down, okay. If you do the calculation you've got slowing down from 40 miles an hour to about 20 miles per hour, that means he's traveling an average of 30 miles an hour or 44 feet per second. He has to cover that 190 feet to cross the limit line; how long will it take? It takes him 4.32 seconds. The yellow light time is allowed to be 3 second in that instance. So we have a problem because there are people who don't do anything wrong and they are running the red light. It's a safety issue, it's also an enforcement issue and --I'll move on and just go to the recommendations.

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Okay. So just the proposals. This is one of the things that we're recommending you do at photo-enforced intersections, you can couple some of this with a -- with a grace period, however you want to figure this out. You need about an additional second for drivers in order -- in order

to make it safer and also to ensure that enforcement is not used improperly.

So what you can is you can mandate the posted speed limit plus 8 miles an hour for the approach speed, you can use 1.4 seconds as the perception reaction time, that will add about a second to the current yellow time. For turning movements you use this little chart. This is, again, based on the Report 731. And you use the approach speed to calculate the critical distance. You use the average speed to calculate the yellow time. Or you can use the same time as the through movement for your left turns.

Okay. Thank you. Thank you for indulging me.

That was really long and I really appreciate the time that you spent.

COMMITTEE CHAIRMAN ROBINSON: Thank you for the information.

MR. BEEBER: I'm happy to answer any questions if there are any.

COMMITTEE CHAIRMAN ROBINSON: Do we have a question?

COMMITTEE VICE CHAIRMAN BAHADORI: Just an observation, colleagues. Maybe we should have started with this. When I talked with Caltrans people and Mr. Nazarian's office -- and I have never met Mr. Beeber. He shared his research with me, his paper. Ad we had a very long

telephone conversation going over numbers and formula and all that but this is the first time we meet.

When we looked at these it was the -- it was not the question of red light cameras and it was not only the question of tickets and people paying millions of dollars worth there, not really doing anything unsafe. What was more concerning to us was that looking at the evidence and looking at the numbers, totally unbiased and objective, maybe we can do better in California. Maybe we can -- all that I am asking is for the Committee to acknowledge that there is enough evidence that warrants a further look at this issue.

Maybe if these numbers are holding we only have the tools at these intersections to collect the data. That's the pattern all over California, all 36,000 intersections. We have just had the tools at 400 and we collected them at half a dozen. But that shows what is happening out there. And maybe we owe it to our people to look at these and do something that in the long run reduces the red light running issue. That's why I sponsored it. The issue is not to focus only on red light camera. But this is serious research, these are serious numbers and facts.

But sometimes, you know, when we do something for 30, 40 years in a certain way we become resistant to any

change. And I hope that we at least acknowledge we need to look at it a little bit more in depth.

COMMITTEE CHAIRMAN ROBINSON: With the technology that we have and the measurements that we can get using the red light camera technology. Obviously that is more information than they had, you know, 20 years ago when this kind of stuff was coming up. So I agree with you, Hamid, that there is enough information here that it bears looking farther into.

We are about safety here. We are not about making money using red light cameras. And that's what we need to maintain our focus on, to improve safety in locations, not to increase a budget in any of these agencies. So as long as we are doing that, if we can use this information to enhance safety then I am all for it.

One of the studies that Mr. Beeber mentioned was done by Mr. Richard Rettig, he is with the Insurance Institute for Highway Safety. And he did a paper in '07 called Reducing Red Light Running Through Longer Yellow Signal Timing and Red Light Camera Enforcement, Results of a Field Investigation, I'm sure you've read it.

MR. BEEBER: I have read it. There's some flaws in that study.

COMMITTEE CHAIRMAN ROBINSON: Well, I found it quite interesting and easy to agree with as well, just like

yours. Some of these -- some of the conclusions that he drew were that yes, you can increase the yellow time and reduce red light running. But he posits that you should do that but don't consider getting rid of your cameras because they are -- they continue to be a good tool. When he looked at raising the yellow time and then elimination of the camera versus raising the yellow time and maintaining the camera he found a continued improvement by keeping the cameras in place.

So I found that interesting. We certainly need to be looking at changes to yellow time but I -- if there are flaws to that assumption I am not sure what they are. At some point in time I'd like to talk to you about that.

MR. BEEBER: We have always said -- just to answer that. We have always said that if you do the engineering first yo may not need the cameras. But if you still have a problem and you want to put them in --

COMMITTEE CHAIRMAN ROBINSON: You could be -- that could well be right.

MR. BEEBER: Yeah.

21 COMMITTEE CHAIRMAN ROBINSON: That could well be 22 right.

MR. BEEBER: So I am not disagreeing with the theory of it.

COMMITTEE CHAIRMAN ROBINSON: John, you had a

question or a comment?

COMMITTEE MEMBER CICCARELLI: A question and a comment, Mr. Chair.

The question is, ultimately when we bring this back what is the action being requested of the Committee? That is the question.

And then the comment is that personally I am supportive of automated enforcement technology as long as it is not misused.

And I further think that the revolution in image processing that is underway right now, that is in the process of revolutionizing pedestrian and bicycle detection, the ability to do automated counts and movement logging of users that used to be done by humans, is going to in the next decade and a half revolutionize the design of intersections. So I think that far from being the minuscule exception in terms of numbers, that automated components of intersection enforcement are today, I think the trend is that most intersections 20 years from now will have a lot of image smarts and be able to assist safety and enforcement personnel legally and reasonably.

I think that it is an artificial distinction today that they are only in a few sites.

That said, I went through Jay's copious documentation. I am compelled that this needs a look by

people much more sophisticated in their understanding of signals than I am, or want to be. But I wonder whether to -- the notion of the bill itself, AB 612, I'm a little uncomfortable, more than a little uncomfortable with mandating a blanket one second increase even for this restricted class of signal that is automatically enforced because it should be an MUTCD change in response to these concerns. Adding one second to whatever, where "whatever" is a moving target, that seems like a problem going forward.

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So I am in support of our advising Caltrans to, yes, look into this. This does seem like mathematically it's an important thing to get right for a safety perspective and I'll let it stand right there.

COMMITTEE CHAIRMAN ROBINSON: Okay, we need to get back out. I know there's a lot of thoughts still out there and we'll get back to that. Larry, you had one question and then we'll go back to the public.

COMMITTEE MEMBER PATTERSON: I'll wait until the rest of the public comment.

COMMITTEE CHAIRMAN ROBINSON: Okay.

MR. BEEBER: I just want to thank the Committee again for indulging.

> COMMITTEE CHAIRMAN ROBINSON: Thank you.

MR. BEEBER: And just one final thing is, if 25 you're going to set a yellow light time and your loved one is at the cross traffic, which are you going to use? Are you going to use the absolute minimum or are you going to give an additional extra yellow time to make sure that nothing happens?

COMMITTEE CHAIRMAN ROBINSON: Thank you very much. Sir.

MR. DORNSIFE: My name is Chad Dornsife, I am the Executive Director of the Best Highway Safety Practices
Institute, I also represent the National Motorists
Association in this region on these issues.

More importantly, I was part of the San Diego red light lawyer challenge to the San Diego red light cameras that took place in the early 2000s and we looked at the data extensively. What was the most interesting thing we found is the camera people when they went in the field had a cheat sheet. And we got copies of that in the discovery saying, this particular intersection had a restriction. In other words, the headway didn't clear all the people trying to turn left so this would be a good location. Or this one had a short yellow. So the cheat sheet for the camera companies was exactly -- embodies the entire problem here.

More importantly, the one intersection that was the poster child was down by the airport. It was writing over 3,000, 2,800, 3,200 tickets a month. The City of San Diego was making \$1 million a month off of that one

intersection. What was interesting there was, prior to the camera going in there hadn't been a single accident. During the entire two or three years that we looked at it there hadn't been an accident. It was the fact that the traffic had to wait two or three phases to clear that intersection.

They went from a 3 second yellow to a 4.9 second yellow and the violations went from 3,000 a month down to several hundred. Then the city council in San Diego went back and looked at this and said, well, maybe that isn't right, we need to have a minimum 4 second yellow so they shortened it from 4,9 back to 4 and then the citations bumped up again.

But more importantly, the entire Kinematic Formula when it was adopted in the early '80s and actually became a standard at that time was a minimum. And in the ITE Manual there was a -- and also in the '88 MUTCD. The manual had a duty for the engineer to look at the intersection and make sure that the signal timing met the needs, the safety needs of the traffic. So the minimum was to be further adjusted upon the conditions of that intersection. If there is a dip that causes a vehicle to slow, if there is sight distance, whatever it is need to be corrected.

Well that requirement to further mitigate for the intersection's needs was removed. And it was removed altogether n the 2002 MUTCD because in the '88 MUTCD it was

called 4B.20. And in that particular regulation it not only required part of the maintenance of the signal that you had to go back periodically to make sure that the signal timing was adequate to meet the safety needs of the traffic, and that was also removed.

I have done hundreds and hundreds and hundreds of studies on different roadways around the state and my favorite, one of my favorites was I was at a speed management program Caltrans put on for all the cities down in San Diego. And they were at the District Headquarters there and a local municipality there, the guy was complaining because he had to do the speed survey three times over to get the right speed.

Reverse engineering is alive and well because of a lot of pressures. And I have found literally in the documentation, on their own studies, speeds approaching 20 miles an hour more greater for the prevailing speed than the signal timings are set. Everybody thinks they are doing the right thing because they've got the pressure. Somebody wants this.

The point is is in one city, I'm not going to mention what city it was, they put the cameras in and they documented an improvement in the safety at the intersections. What they didn't do was increase the yellow. What they did is used the all-red to take the credit for

the safety improvement by removing the conflicts but they maintained the revenue from the yellow light being too short. So these type of anomalies and irregularities are going on today.

I noticed -- I saw it up here on the presentation a minute ago. Back when the Kinematic Formula was nothing more than a rule of thumb. You know, almost like you need one second for every ten miles of approach speed, but it was put into a formula to do the signal timing. Well the rule of thumb doesn't meet the standard of a micro -- a few hundredths of a second for a violation of law that costs somebody \$500. That's where engineers have to do a better job to make sure the signal timing is right.

And I honestly believe that we need to put back in, at least in California, the requirement to do periodic reviews. If you've got an intersection issuing 3,000 tickets a month or 1,000 tickets a month you have got constructive knowledge as an engineer that you've got a problem. And it shouldn't sit there for two or three years writing thousands of tickets. You need to go look at it and find out what remedy needs to be done, what's causing the motorists to be caught and fix it. Thank you.

MR. OLEA: Good morning, my name is Ricardo Olea, I am the City Traffic Engineer with the City and County of San Francisco.

I do think we have a problem as a profession if we can have such wide divergence in terms of such a critical value as the yellow. When I was seeing some of the values being used for the yellow timing on some of these examples I was going, that's not a -- that's not an appropriate yellow. So I think we do need to have better standards. There are a lot of issues that need to be looked at.

We do operate a red light camera system so we have concerns with the legislation that adds a second to the -the red light camera enforcement locations. Not necessarily because it will impact the program but more because of the inconsistencies it creates.

Going forward if the MUTCD or the California standards change the legislation would add a second to those revised standards, so we have been advocating for the state and Caltrans to look at the matter to determine what is the safe and appropriate yellow light, rather than just focus on a very limited set of red light camera locations. If we are in agreement that there is an issue I think it should be addressed for all locations because it's a critical safety issue.

In San Francisco we do use a longer yellow light.

We add 5 miles per hour to the posted speed limit more so

if we know the 85th percentile to be higher. We also round

up to the nearest half second. We also have an all-red that

we calculate very similar to a city formula used by Los Angeles. So we have added a lot of safety factor. But I am aware that some other professionals are probably not following those and I think we should have a discussion about what is reasonable. The yellow lights that we use have been in effect for awhile and I think they have improved safety. As well there are other issues that improve safety such as having improved signal visibility so every intersection has to be properly engineered before photo enforcement is considered.

So I do hope that the Committee can look at the matter, make recommendations so that we don't have such wide divergence of yellow timings, in California at least, and also we don't have divergence of yellows for whether a location is enforced or not. Thank you.

COMMITTEE CHAIRMAN ROBINSON: I have a question.

Your policy for yellow signal timing. That's a blanket
policy, am I correct, or do you treat your red light camera
locations differently?

MR. OLEA: No, we treat all our locations the same. It's calculated by a formula so we want all locations to have that additional safety factor.

COMMITTEE CHAIRMAN ROBINSON: Uniformity.

MR. OLEA: Uniformity. We do take a look at higher accident locations to see if perhaps we need to add

an additional all-red phase based on certain accident patterns, but uniformly we have gone and retimed all our signals to be the higher, the higher yellow that is required.

COMMITTEE CHAIRMAN ROBINSON: We call that engineering judgment.

MR. OLEA: Yes.

COMMITTEE CHAIRMAN ROBINSON: Hamid.

COMMITTEE VICE CHAIRMAN BAHADORI: Just a question, you may not have the information off the top of your head. How many signals do you have and how many of them have red light cameras?

MR. OLEA: We have about 1,200 traffic signals and about 30 or so are photo enforced.

COMMITTEE VICE CHAIRMAN BAHADORI: Okay.

MR. OLEA: We haven't expanded recently based on our statistics being relatively stable. In San Francisco we are not a growing city so a lot of our intersections are relatively the same from year to year. But there's always the issue that things can be safer and I think we should strive to clarify this issue based on recent research.

COMMITTEE CHAIRMAN ROBINSON: Thank you. Any?
Okay. Next. Thank you.

MR. BILLER: I had to look, it's still good morning. I am Gary Biller, I am the President of the

National Motorists Association. I probably traveled here from the furthest, I'm from Wisconsin, but we're a drivers advocacy organization. We have -- we were founded over 30 years ago and we have several thousand members across the United States. We have been very vocal for more than a decade on the issue of yellow light timing and getting it right and the potential abuse of marrying short yellow lights with red light cameras. And so our members are very keenly interested in this topic.

We have lobbied extensively in the local, state and more recently the federal level. And the federal level is a dialogue I started about a year ago with Bruce Friedman of the Federal Highway Administration. It was triggered by -- if you have ever butted heads -- or never butted heads -- you have never gone up against the City of Chicago Department of Transportation. We have engaged them in several different venues. And we are talking about -- and I want to keep this on the engineering level because I think that's critical for this committee.

In all of these discussions they turned to the national MUTCD and the 3 to 6 second guidelines and said, we are at 3.00 seconds. That's what we have always been, that's what we are always going to be. Don't even look at the ITE Kinematic Formula. And the net result in some -- what I remember is the gross result is that the City of

Chicago has annual revenue from red light camera tickets of over \$72 million. It's huge, it's big business.

So in my conversations with Bruce Friedman, the National Motorists Association is proud to have been participating in the National Committee on Uniform Traffic Control Devices and Bruce has invited us to apply to be a sponsor and a voting member, because we do bring the motorists' voice to the table.

What I want to do here though, and to kind of supplement some of what has been talked about is to talk about two of the input variables to the ITE Kinematic Formula.

And I think, Devinder, you circulated my two page.

COMMITTEE SECRETARY SINGH: Yes, I did.

MR. BILLER: So I am going to hit the highlights and not go through that in detail. I know there are some more people that probably want to talk. And I do have one more comment that's not in my written comments that I'll get to too.

The first input variable for the ITE formula that I want to talk about is the driver perception/reaction time. As we know the ITE has long recommended that this variable be set at 1.00 seconds. Report 731 which has been talked about quite a bit, the data from last year, has actually reaffirmed that the mean value of the perception time is

1.00. But of course that means about 50 percent of the drivers have a slower perception/reaction time than that.

And we looked at the data and saw that one standard deviation from that mean is 0.37 seconds. So the NMA has been lobbying hard for an adoption, instead of the traditional 1.0 seconds that you input into the formula, to use 1.4 seconds. And that is also in recognition, regardless of how automated or how smart we get in 20 years going forward, the fact is that the baby boomer generation has long been designated the most mobile generation, not in terms of texting or tweeting, but as far as driving. And if everything goes as planned, I'll be there in 15 or 20 years. And there's going to be tens of millions of senior drivers with slower perception reaction times and I think it's prudent to look at this 1.4 value.

I will add it partly to the discussion about do we have uniform practices across all signalized intersections, not just those with red light cameras. We were pleased to see that the Florida Department of Transportation recently announced that they have adopted the 1.4 value for perception/reaction time. And the way they're doing is they have -- for communities that have red light camera intersections, those intersections must be reevaluated using the 1.4 perception time, looking at their yellow light timing, by the end of this year. Then all other signalized

intersections across the state must be looked at the same way using 1.4. And be brought up to speed -- I guess that's a pun -- by the middle of 2015. So they are not going to -- eventually they are not going to draw a differentiation between the two types of intersections, with or without red light cameras.

The other variable is the approach speed of vehicles. As we have talked about, the California MUTCD allows the posted speed limit. Looking at Report 731, again with more current data, and the fact that -- and they used extensively a lot of Southern California sampling data -- found that the mean speed of approach speed for intersections was typically several miles per hour over the actual posted speed.

So we are in line with the recommendation of the authors of the research, and that is that we would like to see the California MUTCD upgraded to not just using the posted speed but to use either the tried and true 85th percentile speed data or use the posted speed plus at least 7 miles per hour. Now, the 7 miles per hour would add about a half a second to the yellow. If you add -- take the half a second and the 0.4 seconds I talked about for the perception/ reaction time, it's 0.9 seconds more than the current yellow.

The reason that we strongly endorse Assemblyman

Nazarian's bill AB 612 adding the one second is because the technical background for it supports that, the .9 versus the 1.0 In an ideal world we wouldn't need legislation to do this, it would be based on engineering criteria. And that's what we're looking, hopefully, for the Committee to do.

I mentioned I was going to add one comment. In looking at some of the material that was distributed to the Committee Members with this discussion item I noticed that a claim that we are seeing more and more frequently surfaced. And that is that if the yellow light times are increased drivers are going to adjust and they are still going to aggressively go at red light -- attack red light intersections.

When I have been faced with that directly I have asked the person, where did you get that information? And I have never gotten a direct answer on where that premise came from. so let me go on the opposite side and tell you why that isn't true. And I want to read -- it will just take a second and then I'll be done; I'll read three quotes to you.

The first one is from the ITE Journal from

November 1980, from the authors Simpson, Zador and Tarnoff.

Quote: "The data show that the percentage of the last to

cross vehicles clearing the intersection at T+0.2 seconds or

more past the yellow onset was not appreciably changed by

the extension of the yellow."

More recently, 19 -- well, a little bit more recently, 1985, an ITE quote: "Research has consistently shown that drivers do not, in fact, adapt to the length o the yellow."

And then lastly, and this goes back just a few years ago, mid-2000s, Bonneson/Zimmerman was cited before for the Texas Transportation Institute, quote: "Drivers do adapt to the increase in yellow duration. However, this adaptation does not undo the benefit of an increase in yellow duration."

So again, on an engineering basis, if here is a counter-claim that drivers do adapt. And Jay Beeber showed a lot of data from cities that showed over time with cameras still up after the longer yellow they didn't rebound, we'd like to see it. But we have not yet and we have seen to the contrary, the data shows.

So thank you for your time and appreciate your relooking at this issue.

COMMITTEE CHAIRMAN ROBINSON: Thank you very much.

Any questions? Thanks a lot.

Anyone else? Please come up.

COMMITTEE MEMBER MARSHALL: While he is on his way can I just check in?

COMMITTEE CHAIRMAN ROBINSON: Absolutely.

COMMITTEE MEMBER MARSHALL: Take the temperature

of the group. Do I need to contact our lunch place and let them know anything?

COMMITTEE SECRETARY SINGH: Let's move to one o'clock maybe.

COMMITTEE MEMBER MARSHALL: One o'clock?

COMMITTEE SECRETARY SINGH: Yes.

COMMITTEE MEMBER MARSHALL: Okay, I'll give them a

call.

COMMITTEE CHAIRMAN ROBINSON: Thanks.

Good afternoon.

MR. WIDSTRAND: Good afternoon. My name is Eric Widstrand, I am Vice President and General Manager of the Los Angeles office for Sam Schwartz Engineering. I am a registered professional civil engineer, traffic engineer and a certified professional traffic operations engineer. Prior to joining Sam Schwartz two years ago I was a city traffic engineer for Seattle, Washington, where we successfully used red light cameras to reduce collisions at those locations and continued to use engineering judgment in setting our signal timing.

I wanted to talk this morning -- I appreciate the Committee's discussion about using the continued use of engineering judgment. I think as has been said today by many people, the main factor we want to be considering is safety. And that is the ultimate goal of our profession,

the ultimate goal of what we should be doing in setting our signal timing. I think safety comes from providing consistency. I think it is not random, it is not providing an arbitrary number, it's developed through using engineering judgment.

I think that there have been studies done that show that just increasing yellow times do increase collisions. NCHRP 705, which used data from California, San Diego and San Francisco, that showed a 14 percent increase in all crashes by extending the yellow time, a 7 percent increase in injury and fatal crashes, and an 8 percent increase in angle crashes. So it is not something to be taken lightly to just randomly extend it.

I think that engineering judgment is the way to do it. And whether that is using 85th percentile as was recommended in NCHRP 713 -- and Richard Rettig is a colleague of mine at Sam Schwartz. He was the co-author on that and has done some previous safety work in that field -- or whether it's using a combination of factors. I appreciate the Committee is still looking at these factors moving forward and allowing further discussion. Thank you.

COMMITTEE CHAIRMAN ROBINSON: Thank you.

I thought I saw another hand back in the back.

24 Rock.

MR. MILLER: Just a few comments I'd like to make

on this. I recognize although I am an alternate to the Committee I am not with a public agency. I therefore don't always appreciate the concerns of burden of having to do things because of changes this committee may or may not do.

I am really very interested in safety and I've heard that spoken many times by the members of the Committee.

You know, I have no doubt that increasing yellows reduces the frequency of running red lights, that's pretty logical to assume that. I really keep on asking myself the question, can we optimize safety through the proper approach to managing our yellow indications.

Every once in a while you hear a little bit of evidence that somebody increased yellows and they got a safety benefit. That tends to not be the dominant opinion. For every study that says that you'll find another one that doesn't say that. Individual studies are always subject to some of the limitations of small sample size by a selection set at the start and really not a knowledge of what else might have been done at the location to produce safety. But when I see a 50 percent safety benefit in an intersection from lengthening a yellow, I'm saying, well there just aren't that many accidents out there to get a 50 percent benefit for something as simple as that. I have a feeling there is something in that study we don't know.

What it comes down to is I think we could probably spend hundreds of thousands of dollars researching, trying to figure out how to optimize this. But I think that NCHRP study was really the federal government's attempt to really start studying that issue from more of an academic perspective where they can get around the biases of small sample sizes, get around some of the other biases that happen. Then they produce information in there which we can kind of look at. Well here is a chart that kind of demonstrates my position, well here is a chart that demonstrates my position.

What I really end up wanting to look at in a study like that is what did they recommend? Because I think that is the information that is the best value to us based upon their position to be able to commit a lot of resources to a large sample size. That keeps coming back to some of the basic recommendations such as, if you don't know the 85th percentile use posted plus 7 miles an hour. That's not that complicated an approach to take. And I can't get away from that. If I know the 85th percentile, I know the formula was based on the 85th percentile. If I don't know the 85th percentile, the best, well-funded research says I should add 7 percent to the existing speed limit.

I hear a lot of testimony, everything is in compliance with the MUTCD. To me that means nothing. The

federal MUTCD says, anywhere between 3 and 6 seconds, and we heard how Chicago uses that. Our state MUTCD says, start with the 85th percentile, but prior to 2006 we could round that down by 9 miles an hour. After 2006 we can only round it down by 7 miles an hour, but if it was established before that date we could still keep it in there by 9 miles an hour. That all bothers me. So when I hear, compliant with the MUTCD, I am not hearing, compliant with the 85th percentile, I am hearing, compliant with something that may or may not be right.

I keep coming back, as I said before, I really think if the NCHRP study is pointing towards adding 7 miles an hour to the posted limit if you don't know the 85th percentile, I think that's the way we should go.

Now if you do choose to study this further, no surprise, I would be happy to help with those efforts. I think there probably is some data that could be collected in the state without spending too much money on the effectiveness of, you know, these changes on collisions and things like that.

I don't know where you're going, I'm hearing a lot of opinions here and I'm kind of thinking maybe you are going towards further study. Thank you very much.

COMMITTEE CHAIRMAN ROBINSON: Thank you, Rock. Bill.

25 Bill

MR. WINTER: Bill Winter, Los Angeles County

Public Works. I really don't have anything to add. I think

it has all been very well stated by the Committee.

In some ways this discussion, it's less a debate and more a little bit of therapy. Trying to, you know, reconcile how all of our practices as engineers, you know, how we have reconciled that and kind of benchmarking ourselves with others as we're hearing how they're doing it as well.

I think this is a greta opportunity in that sense to take that discussion forward to the audience that isn't here, our peers as engineers that aren't in this room, to communicate some of the results of these studies, some of what is being heard here today.

I did find it interesting though, one other note just to end on is the discussion of speed limits. While the use, the accepted use of the 85th percentile in setting a radar-enforced speed limit, you know, realizing that that still criminalizes 15 percent of your population. You know, we as engineers, we have criminalized 15 percent of the population driving the road. Not all of them -- we recognize not all of them are being cited for their exceeding the speed limit. In the case of automated enforcement, as was stated by some of the members, that's not always the case. It seems like there is a consistency

in that enforcement or that citation being done.

So it really depends on the metric you are using here. If you are talking about safety and the metric that we have traditionally used is collisions and reduction of collisions, or if you're talking about the reduction in the number of citations. You know, that may be another discussion of how any kind of other study would choose to compare that kind of a metric.

COMMITTEE CHAIRMAN ROBINSON: Thank you.

Anyone else?

Seeing none we will bring the discussion back in to -- oh, I'm sorry.

ASSEMBLYMAN NAZARIAN: Well thank you. First and foremost I wanted to take a moment briefly and say, good afternoon. Thank you to the Chair and the Committee Members as ell as all the attendees for traversing from all over, especially from Wisconsin as well to be here for this issue.

I've got to say, when I introduced this bill as a freshman member of the Assembly, the state Legislature, in a year given that we have tremendous challenges facing, you know, the opening -- the impending opening of the Panama Canal and all the challenges that that's going to be putting us with dealing with our transportation infrastructure and being competitive with them, as well as implementing a national mandated health care system, as well as changing a

education funding formula, which as you all know education is half of the state's budget. You know, I never thought a -- what would seem to me a fairly simple solution would have caused so much of an issue. So thank you very much for this humbling experience and for --

(Laughter.)

ASSEMBLYMAN NAZARIAN: -- for allowing me the benefit of learning so much about this. So I wanted to -- I have a prepared statement that I want to read pointing out some of the arguments that we have all already heard quite a bit about.

But I also wanted to take a moment to first of all say thank you very much to everyone's thoughtfulness and interest in this issue. We all have our various organizations, constituencies, but I am here on behalf of my residents and my constituents, who whether they vote for me or outside of my jurisdiction, immediate jurisdiction, look at me and my fellow 79 colleagues as their regulators and their governors and their policy makers.

I never, for once, wanted to play engineer god by suggesting what we what we need to do, whether in placing one second or whatever that number was. What was most important to me was to raise this issue and talk about the importance of a dynamic society that has not been keeping up -- unfortunately some components of our jurisdictions or

maybe overall view of the issue has not kept up with the dynamic changes that have been taking place. And that's, that's just human nature and that's what we learn as trying to best serve our constituents and our public, by changing and constantly staying in tune with the dynamic needs that come about.

So with that I wanted to say thank you to Michael, Mr. Robinson, for pointing out the issue of the collision reduction. For me that has been -- this has all been in the name of public safety.

And just as a brief, historical background, by the way, I was a young staffer or deputy working for an LA City Councilman back in 2001-2004, during which time I would go to community meetings and gatherings and advocate for the idea of bringing in red light cameras. LA instituted the red light cameras back in 2002 or 2003. I'm sure there are some engineers here from LA who would correct me on that if I'm wrong. But I specifically remember going to various neighborhood council or homeowner association meetings and discussing the virtues of, let's utilize this public safety measure. And at that time it was the best thing since sliced bread and it was, it was a very easy victory for everyone involved.

But again, with time and with the opportunity to actually view a collection of database and information of

what we have been able to gather in the course of the last ten years -- I am not advocating getting rid of the program whatsoever, even though the City of LA, the two largest cities in California, two of the five largest cities in California have already done away with the program, a third one is impending.

But that is not my goal with this. My goal, purely and succinctly -- and I can probably even end with this but I still want to read my technical points.

(Laughter.)

ASSEMBLYMAN NAZARIAN: Was all in the name of -we took a great step in making sure that we put the fear of
God in those driving, utilizing the privilege of driving on
the streets and making sure that they are careful as they
are taking all the other motorists' lives as well as theirs
into their hands.

Yet this measure has become so punitive in some ways, without offering any type of a caveat or a recourse or some measure of allowing someone who falls into that zone, the dilemma zone, for example, for a term of a better -- at least whatever term I am going to use, a better use of my term. To have that opportunity to engage the intersection in a safe way.

I maybe don't understand the comments of Mr. Jones but delaying the implementation of the camera by half a

second or whatever duration from the time the light turns red. Again, maybe I misunderstand this, but in my view that wasn't a safety measure that I would want to see. My whole goal, again, was just to make sure that if collision is reduced there is no question, in my mind at least, that after implementing the red light cameras collisions did decrease. But at the same time we want to make sure that the public isn't paying a certain price either. That they are receiving the benefit of also not only traversing in safer streets but also making sure that they have the opportunity to be able to negotiate passing through an intersection as well. So I will still hold steadfast to my argument of why I think extending the yellow light is the better way.

So with that I think I touched on all the points at least that I wanted to briefly, that briefly I wanted to address given the comments that I heard. So with that I will just take a couple of minutes and offer you some of the thoughts and argument for why I am here.

I don't know how many members of the state legislature appear before you make a plea on their case but thank you. I felt that this was important enough for me to be here. And also to -- I very much appreciate the length and depth that many folks have gone through to present their case and present statistics. I heard from two individuals'

comments about how challenging -- how there will be accidents if there are increased yellow time lines, without offering much of a background for it. I don't know if there is information I'm missing. I'm happy to look into that later on.

But I introduced this bill, got it passed through a bipartisan effort, a 72-0 vote in the Assembly. Went into the Senate, at which point in conversations with various committee members I decided that instead of forcing through a mandate, a legislative mandate -- which I agree, I am not crazy about that myself. Because again, trends will change and we might need to then look at changing the legislation that will be passed now or was to be passed.

So my goal wasn't to just legislatively find a fix. I think we have done that in the state far too often and sometimes have legislated ourselves into a corner. I would much rather see the engineers come to a conclusion that benefits our public transportation users.

So with that what I did was I extended my bill into -- I made my bill into a two year bill so that it would appear before you, passing my legislative deadlines in the Senate, so that -- so that I was forced to make it into a two year bill. To make sure that you as the deciding advisory organization and the engineers that you represent actually take the time into hopefully coming to a conclusion

that will be in agreement with what I am trying to advocate for on behalf of my constituents.

So with that said, in an effort to promote traffic safety and ensure that drivers have enough time to clear a problem intersections I request the California Traffic Control Devices Committee to compose a report that analyzes the benefits of adding time to the minimum yellow light change interval at intersections equipped with traffic enforcement cameras.

I also request the study to include a report on the benefits and differences between using 85th percentile speed, posted speed or an alternative method to define approach speed.

Several studies have noted that lengthening the minimum yellow light change interval above the required minimum will reduce violations, collisions and reflect the actual speed of flowing traffic. Most notably, a study conducted by the Texas Transportation Institute, which was shown a while ago, showed a 40 percent decrease in collisions after yellow time increased by one second above the computed duration, which is the minimum time as calculated by the Institute of Transportation Engineers' Kinematic Formula.

It is also important to note that the 85th percentile approach speed was used by the Texas

Transportation Institute to come up with the computed duration. In contrast, California uses the posted speed limit.

A recent study by National Cooperative Highway
Research Program concluded that the actual 85th percentile
approach speed should be used in the kinematic equation.
However, if the field data is not available, an estimation
of 7 miles per hour above the posted speed limit is an
acceptable alternative.

As mentioned, California utilizes the posted speed limit and not the actual speed of approaching traffic to determine the minimum yellow change interval. In fact, as the California Traffic Control Devices Committee noted in your agenda, because the posted speed limit sometimes is 9 miles below the 85th percentile speed, the minimum yellow light change interval time calculated on the posted speed limit, which is reduced 9 miles from the 85th percentile, could create a trap for drivers approaching the intersection during the change in signal phasing.

The latest research supported by engineering experts and data presented in the National Cooperative Highway Research Program report states that the 85th percentile speed is suggested as the most appropriate measure of approach speed. It is clear that California's standards are not up to par to the latest research, and

using the posted speed limit rather than 85th percentile speed, is outdated and potentially unsafe.

In addition, recognizing the benefits of extending yellow light intervals above the required minimum, local jurisdictions and the state of Georgia have increased their yellow light timing. In 2010 the state of Georgia added one additional second, which you already heard, to the yellow light times at photo enforced intersections, and within 90 days red light running violations dropped 72 percent at red light camera intersections.

In addition, the California city of Loma Linda saw a 90 percent decrease in violations after the city increased yellow time by one second above the state minimum. As shown and discussed, the state minimum is out of date and does not reflect optimum time to increase safety.

Based on the benefits mentioned I respectfully request that your Committee evaluate this issue by creating a subcommittee to report back to the entire California -- again, your committee, with findings and recommendations by the next quarterly meeting.

I request to participate in these discussions, I or my staff, and actively engage with the subcommittee.

With that I, again, wanted to say thank you for allowing me to speak and for all of your great interest in this issue and I look forward to working with you all, thank

you.

COMMITTEE CHAIRMAN ROBINSON: Thank you.

I think we've heard quite a little bit of discussion today on this, probably as much as we're going to get. Once we -- once we get past a certain point we all start repeating ourselves and it's not -- it's not efficient for us to do that.

I think we are at a point where we may want to start talking about how to, how to tackle this. We've got a lot of information up here and it's -- some of it is pretty eye-opening. I think maybe one of the things that we should just take a second or two on is do --

A subcommittee seems to be a good idea. The Assemblyman is interested in that. And I think based on everything that I'm hearing we've got the makings of a good review for a smaller group of people. We could sit and debate for quite a while what should go into the findings and what shouldn't but the bottom line is a smaller group of people will probably more efficiently get to the bottom line faster. So, Hamid.

COMMITTEE VICE CHAIRMAN BAHADORI: Mr. Chairman, thank you for everyone who shared their views with us.

If I can make the analogy of a criminal proceedings. This was the preliminary hearing. And the evidence, at least the way it was presented to me, warranted

in my mind further discussion and further review. Where that may lead us, as you said, that's going to be up to a group of people who are going to focus on these, go through this information and look at every piece, look at the implications of changes. I hear a lot like, for example, posted-plus-7. If you do posted-plus-7 you always end up with a 2 because it's going to be 35 plus 7, 42. You go to the table, there is no value for 42, things like that. So a lot of discussions.

But at a minimum I thought that, as Mr. Nazarian also said, that maybe we have not caught up as a profession with a dynamic society. And our technology has shown us that maybe the way that we are doing things are not the best way of doing it. We would not have had this information without so many red light cameras all over California. Now the red light cameras, thanks to the red light cameras, we are seeing that a very small change in the yellow timing can significantly, significantly reduce the number of red light runnings. And red light runnings are what causes red light accidents, so instinctively you say, I am reducing red light running violations, I must be improving traffic safety.

You can argue and go to research and do all kinds of stuff. But at this point what I would like to ask my colleagues on the Committee is to at least acknowledge that this issue needs further evaluation. That we can do better.

Our technology, the data, the latest research from NCHRP, everything points to us being able to do better. How we can do better, that we can discuss but I support the idea of a subcommittee.

And again like previous time I suggest that we even expand the subcommittee beyond the membership of this committee for the experts who know these things better than -- much better than I do or I will ever learn. Like the nuances of signal timing, human behavior. We have very good human behavior scientists who can help us with this. And obviously in this specific case, a member of the legislative who has already offered his staff to work with us on this.

COMMITTEE CHAIRMAN ROBINSON: Okay, thank you.

Is there anybody here who would disagree with the creation of a subcommittee to review this? If not then I think we are all in agreement that that should happen.

Larry, another comment?

COMMITTEE MEMBER PATTERSON: Yeah, just a quick one. I'm glad I waited until after the public comment because the comments were very helpful. But I'd agree. I'd only put one little -- just a clarification. Because obviously, we are not going to be in a position, especially if we try to set a quarter of time, a three month time to basically look at this. It is not going to be a research study, it is going to be a review of the information that is

available to us and I like that idea.

I think a couple of things I'd like to just comment on since the criminal reference was brought up. Our individual from I think LA County, right Bill? I think he was the one that said that we've criminalized 15 percent of the population. But I think if you go back to the setting of 85th percentile it will say, 85 percent of the people will drive at a safe and reasonable speed for the conditions. And so those that we're criminalizing deserve to be criminalized, you know.

(Laughter.)

COMMITTEE MEMBER PATTERSON: So I think the other -- I like the idea of setting up a committee, I'd support that idea. And at least making sure we've taken a careful look at the NCHRP research, And even the presentation recognizes that 60 percent of the problem may be inside the 85th percentile speed as opposed to posted speed so I think that's worth a conversation.

COMMITTEE CHAIRMAN ROBINSON: As the Chairman who is stepping down after a year, only a year of service in this position, and understanding that the Vice Chairman typically will pick up for the slack that I'm leaving, I would prefer to I think leave the composition of the committee more in his hands since he is going to be working with that group. And I am hearing that he is interested in

perhaps a committee that is comprised of a few members on CTCDC as well as a few of the public at large. Are there -- are there members here who have a particular interest in spending some additional time working on this issue?

COMMITTEE MEMBER PATTERSON: I would.

COMMITTEE CHAIRMAN ROBINSON: Larry.

COMMITTEE MEMBER BENTON: And there will be representation from Caltrans.

COMMITTEE CHAIRMAN ROBINSON: Caltrans, okay.

COMMITTEE MEMBER MARSHALL: Mr. Chairman, I want to essentially volunteer to not be, and I have a particular reason. Not that I am not willing to help but my presence here, I am representing one of the more rural agencies on the Committee and this is really not our wheel house. And candidly, my alternate on the Committee is from a county that is just as rural as mine so I don't think we are the most advantageous people to include. I will certainly continue to stay current and do my part but I don't think we are really the strength that this group needs.

I am hoping that I could potentially put Bill on the spot. I'm hoping Bill will be willing to be a voice for counties on this because I think he would bring a lot of value to this.

COMMITTEE SECRETARY SINGH: Mr. Chairman?

COMMITTEE CHAIRMAN ROBINSON: Yes.

COMMITTEE SECRETARY SINGH: Subcommittee is going to be lead by one person so they are called Chairman, Chairman for the Subcommittee. Hamid last time chaired that subcommittee so maybe, you know, it's better Hamid can lead again.

COMMITTEE CHAIRMAN ROBINSON: Hamid, is it something that you would be interested in doing?

COMMITTEE VICE CHAIRMAN BAHADORI: You know what --

10 COMMITTEE CHAIRMAN ROBINSON: Chairing a 11 subcommittee.

COMMITTEE VICE CHAIRMAN BAHADORI: I would be happy to do that. Last time our effort was successful. It took long. And I want to echo what Larry just said, this is not going to happen in two months. It's going to take longer, so that everybody knows. And those who are volunteering, last time just to give you an idea, we had about I think five meetings and the shortest one was by phone. A lot of people participated by phone. The shortest one was two hours, the longest one was about four and a half hours. So that's the kind of commitment that it's going to take those of you who are volunteering.

COMMITTEE CHAIRMAN ROBINSON: So far we have -- and I'll get right with you, John. So far we have Caltrans, we have Larry, we have Hamid and we have Bill.

Yes, Zaki? 1 2 MR. MUSTAFA: Do you have city of LA represented? 3 COMMITTEE CHAIRMAN ROBINSON: I'm sorry? 4 MR. MUSTAFA: Is city of Los Angeles represented? 5 COMMITTEE CHAIRMAN ROBINSON: City of LA? COMMITTEE SECRETARY SINGH: Let's start with 6 areas. So Bill will -- Bill, you will be working with the 7 8 committee? 9 COMMITTEE CHAIRMAN ROBINSON: Bill is county of 10 We have Caltrans. LA. 11 COMMITTEE VICE CHAIRMAN BAHADORI: The city of LA 12 last time, of course we had John Fisher on the committee. 13 But city of LA we always include in issues like this because 14 they pretty much have 12 percent of all the state's signals. 15 They have 4,300 traffic signals. 16 COMMITTEE CHAIRMAN ROBINSON: If you're in 17 agreement to that then I'm fine with it. 18 And then we want -- we also want to make sure that 19 we have the public at large. Mr. Beeber? Is everybody okay 20 with that? Everybody is in agreement? 21 (Affirmative responses.) 22 COMMITTEE CHAIRMAN ROBINSON: Okay. 23 COMMITTEE VICE CHAIRMAN BAHADORI: And also last 24 time we had two consultants, two traffic engineering 25 consultants.

1 MR. MILLER: I already volunteered.

COMMITTEE VICE CHAIRMAN BAHADORI: So Rock Miller.

COMMITTEE CHAIRMAN ROBINSON: Is there anyone else who may not be here that we can -- that we think would be a good idea?

COMMITTEE MEMBER BENTON: There will be representation from Caltrans. Do I need to name them now or do I -- can I --

COMMITTEE CHAIRMAN ROBINSON: I think just Caltrans is good enough.

COMMITTEE MEMBER BENTON: Okay.

COMMITTEE CHAIRMAN ROBINSON: All right. So I think we have a pretty good core for your subcommittee. Is there -- do you think we've got enough? You've probably got one or two others that you might want to --

COMMITTEE VICE CHAIRMAN BAHADORI: Yeah. We may

-- just for a suggestion, last time we expanded it to

traffic engineers of, maybe like for example, City of Long

Beach. They don't have representation but they were -- if

the members of the cities -- the League. One of the members

of the League here think that they adequately speak for all

the cities. But if you want to add a couple of your

colleagues we --

COMMITTEE CHAIRMAN ROBINSON: I would like to suggest, I am hearing that San Francisco has a red light

program. Is there anybody who we have picked so far that -is there anybody else that we have picked so far that is
running a red light program? You're running one? Okay.
You're Northern California, it would be great to have you on
board as well.

MR. OLEA: We can participate, the City and County of San Francisco.

COMMITTEE CHAIRMAN ROBINSON: Thank you.

COMMITTEE MEMBER PATTERSON: In terms of what Hamid said, I can certainly add to the conference call that we have with the League of Cities and ask if there are any who have a traffic engineering background who would like to -- and signal timing in particular that would like to participate on the committee. And if there are I can at least present those to Hamid and you can decide as the chair whether you need them or not.

COMMITTEE CHAIRMAN ROBINSON: Obviously

Assemblyman Nazarian's office, you're welcome to attend,
participate and go as far or as little as you'd like.

MR. BEEBER: May I just offer that there are some experts in the field who you may want to reach out to. I am obviously not volunteering them, but some of the authors of some of these studies, Dr. Karl Zimmerman or Dr. Peter Parsonson who has been an expert and an expert witness. So just to look. And there may be some other people outside of

this group who have been experts in the field for many decades.

COMMITTEE CHAIRMAN ROBINSON: Thank you.

We do owe the Senate Committee on Transportation and Housing a response based on what we have gone through today. SO I think our response is basically going to be that we've determined that there is a need to look at this in greater detail and that we are setting up a subcommittee that is comprised of professionals in the various appropriate fields that can get to the bottom of this. And their task will be to move as quickly as possible to make recommendations back to this Committee.

John, I apologize, I am not -- I am not trying to ignore you.

COMMITTEE MEMBER CICCARELLI: I emphatically do not want to be on the subcommittee, I think there are people far more qualified than I. But I want to state my concern as one of the two representatives for non-motorized issues. The main concern I have is unintended consequences. I trust that those who have been named already will be more than capable of addressing this.

But one of the key things that is of importance for non-motorized user safety is the -- and to the extent that one unintended consequence of a change in timing of whatever nature in signals might lead to creeping increases

in the actual speeds in a city, especially on the busiest streets, that's a big issue for non-motorized safety.

Because as we all know. collision impact is a square of velocity. A little bit of increase in speed is a big increase in impact velocity.

I look forward to tracking the results and to digging in my own -- increasing my own understanding about the fine point of how you do this and what the consequences might be. But I am particularly concerned that someone might be led to clear the intersection at a higher speed or to make a left turn at a higher speed. Especially at a large intersection, it's possible to make a very large radius left turn. If someone is led to do that a pedestrian can be put at jeopardy.

Not everybody obeys the letter of the law, both in terms of 85th percentile, but also in terms of when they're present in the street. And so be careful of putting the people that aren't quite complying with crosswalk law in jeopardy because something that you have done with an equation leads more people to legally travel faster.

COMMITTEE CHAIRMAN ROBINSON: Duly noted. And I trust that you will hold the subcommittee to task by the appropriate questions as they come back and report.

COMMITTEE SECRETARY SINGH: John, if there is anyone who wants to volunteer just give me the name, I will

be making the final list for the --

COMMITTEE MEMBER CICCARELLI: I think with Rock
Miller on the committee --

COMMITTEE CHAIRMAN ROBINSON: On that same -- on that same note. One thing that wasn't discussed today was the potential for what happens when we do increase yellow time? And one piece that wasn't talked about today is the environment and what additional delay does to some of the more smoggy areas of our state. And we may want to touch on that too as we're going through it.

Bryan?

COMMITTEE MEMBER JONES: And Assemblyman, I just wanted to say that the only reason why I approached it from a different perspective is that it was being brought to my attention from a red light violation standpoint or citation standpoint. And if the citation was the nemesis for coming forward then how we write a citation could be a consideration. Because what I was seeing is the statistics were, you know, tenths of seconds for motorists making mistakes, or humanistic characteristics or behaviors were causing a significant financial burden on people. And if that was the case that's not how we enforce it with our law enforcement to the same degree and that's why I was proposing or suggesting that that might be another consideration.

I do -- I do, you know -- I think a couple of very important things have come out of this discussion. One is that our profession became very stagnant from the 1960s. And no disrespect to our grandfathers and grandmothers in our profession but we did not stay dynamic with the changing times. And we did a study in 1959 that we're relying on in 2013. And cars have increased their antilock brakes in that time, cars have implemented seat belt laws in that time, cars have implemented child care restraints in that time, airbags.

All these improvements have been done to cars but every year 36,000 people die on our roadways. And why are they dying? A lot of it is the result of speed on our roadways. And speed is the number one contributor. And 93 percent of our collisions that occur in the United States are the result of human errors.

And we as a profession haven't done much -- as a transportation profession haven't done much to improve safety in that same time period as the automotive industry has done.

And I would encourage -- and I wrote an article or a blog on it called The Transportation Profession as

Visionary. That if you look it up, the San Diego American

Planning Association highlighted it. But it really talks about we as an organization need to start looking at -- you

know, we have local jurisdictions applying freeway lane widths because they are designing roadways for semi-trucks, even though semi-trucks only make up two percent of our traffic. And yet when you have a passenger car that is only six feet wide, they feel very safe to drive 10 or 15 miles over a safe speed limit. And when you have the difference between a 10 mile per hour -- or a 20 mile per hour car and a 40 mile per hour car, a pedestrian or a bicyclist in a collision with that has almost zero chance of surviving that collision.

And so when we look at some of those speed things we need to be looking as a profession as a holistic approach on how do we make our roadways safer. And if that means going back and revisiting some of the basic assumptions that our forefathers and foremothers made 50 years ago or 60 years ago when the largest public works infrastructure project was underway to build the freeway system and many of those people gravitated toward local jurisdictions. But our intersections and roadways are getting bigger and faster and wider and as a result they, in some cases, are becoming more dangerous because we are relying on humans to do the right thing and humans don't always do the right thing.

And so I would just encourage -- then we need to supplement it with enforcement but there is not 24 hour enforcement. But then we do technology with traffic red

light running cameras and we have 24 hour enforcement and then we get some data.

But we have a lot going on in our profession and I think as a profession we need to be more progressive and more dynamic and less set in our ways and look for ways to rethink about how our roadways are designed and striped and signed because we still have 36,000 people every year and that number is not going down very quickly. And that equates to four -- just to put it in -- that equates to four Newtown Massacres every day on our roadways throughout the United States. And we all saw how America responded to Newtown's shooting, but in America we have more people dying on our roadways than by gun and guns get so much more attention than our roadways.

COMMITTEE CHAIRMAN ROBINSON: Thanks, Bryan.

Unless there is any final word from anyone we are going to consider this discussion closed, with the action being as I previously stated, the letter that will go back to the Senate Committee on Transportation and Housing.

We have set up the Committee, Hamid will chair it and flesh it out as additional need arises.

And with that we will move on to our next agenda item which should be very quick, it is a discussion item on Blank-out Stop or Yield signs for mid-block crosswalks. Do you have just a quick note on that?

COMMITTEE SECRETARY SINGH: Mr. Chairman, I put 1 2 this item on the agenda without even asking my supervisor. 3 (Laughter.) 4 COMMITTEE CHAIRMAN ROBINSON: Are you in trouble? 5 You're in trouble now. 6 COMMITTEE SECRETARY SINGH: So I am taking it off. 7 You know, we don't want any discussion on this item. We 8 will wait until efforts to come up with some language. 9 COMMITTEE CHAIRMAN ROBINSON: Okay, thank you. 10 COMMITTEE VICE CHAIRMAN BAHADORI: It was nice 11 knowing you. 12 (Laughter.) 13 COMMITTEE CHAIRMAN ROBINSON: Then our last item 14 will be confirming that our next meeting will be either 15 November 7th or 14th at the pleasure of this committee. Is 16 there one date that works better than the other for the majority of you? 17 18 COMMITTEE VICE CHAIRMAN BAHADORI: November 7th is 19 the day that will live in infamy. 20 COMMITTEE CHAIRMAN ROBINSON: November 7th --21 COMMITTEE VICE CHAIRMAN BAHADORI: Is Pearl 22 Harbor. 23 COMMITTEE CHAIRMAN ROBINSON: -- is the incoming 24 chair. 25 COMMITTEE VICE CHAIRMAN BAHADORI: That's December

1	7th or November 7th?
2	COMMITTEE MEMBERS IN UNISON: December.
3	COMMITTEE SECRETARY SINGH: The 7th is okay?
4	COMMITTEE MEMBER CICCARELLI: November 7th is the
5	beginning of the California Bike Summit in Oakland, it's a
6	statewide conference in my field.
7	COMMITTEE CHAIRMAN ROBINSON: Okay.
8	COMMITTEE SECRETARY SINGH: The 14th?
9	COMMITTEE CHAIRMAN ROBINSON: Is everyone okay
10	with the 14th?
11	COMMITTEE MEMBER GREENWOOD: No.
12	COMMITTEE CHAIRMAN ROBINSON: Mark is not okay
13	with the 14th. Shall we arm wrestle?
14	(Laughter.)
15	COMMITTEE SECRETARY SINGH: Let's stick with the
16	7th and we'll see if maybe John
17	COMMITTEE CHAIRMAN ROBINSON: Do you have an
18	alternate?
19	COMMITTEE MEMBER CICCARELLI: It's a four-day
20	conference so it's not a show-stopper for me.
21	COMMITTEE CHAIRMAN ROBINSON: Do you have an
22	alternate then that can attend?
23	COMMITTEE MEMBER CICCARELLI: I do, yes.
24	COMMITTEE CHAIRMAN ROBINSON: Okay. So it will be
25	November 7th?

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COMMITTEE SECRETARY SINGH: Yes.
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 2
              COMMITTEE CHAIRMAN ROBINSON: And it is a Southern
 3
   California location.
              COMMITTEE SECRETARY SINGH: TO be determined.
 4
 5
              COMMITTEE CHAIRMAN ROBINSON: To be determined by
 6
   Caltrans.
 7
              COMMITTEE SECRETARY SINGH: Yes.
              COMMITTEE VICE CHAIRMAN BAHADORI: So it is
 8
9
   November 7th?
10
              COMMITTEE SECRETARY SINGH: Yes.
11
              COMMITTEE CHAIRMAN ROBINSON: Okay.
              COMMITTEE MEMBER MARSHALL: The 7th is not good
12
13
   for either me or my alternate.
              COMMITTEE SECRETARY SINGH: November 7th? Well,
14
   we can move it to the last week of October.
15
16
              COMMITTEE CHAIRMAN ROBINSON: Okay. So you want
17
   to move it to the last week of October?
18
              COMMITTEE SECRETARY SINGH: Yes.
              COMMITTEE CHAIRMAN ROBINSON: Not Halloween.
19
                                                            Ιf
20
   it is then we are all wearing costumes.
21
              (Laughter.)
22
              COMMITTEE CHAIRMAN ROBINSON: Okay, let's find out
23
   what it is.
24
              (Several Committee Members discussing
25
              meeting dates.)
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COMMITTEE MEMBER JONES: How about the 24th? 1 2 COMMITTEE SECRETARY SINGH: I'm not available the 3 24th. 4 COMMITTEE CHAIRMAN ROBINSON: Let's leave it on 5 the -- let's leave it on the 17th. And Bryan, if you will 6 invite your alternate. 7 COMMITTEE MEMBER JONES: Okay. 8 COMMITTEE CHAIRMAN ROBINSON: All right. And our 9 last item is to adjourn. Do I have a motion to adjourn? 10 COMMITTEE VICE CHAIRMAN BAHADORI: I make a motion 11 to adjourn the meeting and thanking you very much for your 12 chairmanship and leadership over the last year facilitating 13 our discussions. Thank you very much. COMMITTEE CHAIRMAN ROBINSON: And do we have a 14 15 second to that motion? 16 COMMITTEE MEMBER PATTERSON: Second. COMMITTEE CHAIRMAN ROBINSON: We've got a motion 17 18 and a second. All in favor? 19 (Ayes.) 20 COMMITTEE CHAIRMAN ROBINSON: Opposed? 21 We're adjourned, thank you. 22 (Thereupon, the meeting of the California 23 Traffic Control Devices Committee was adjourned at 12:47 p.m.) 24 25 --000--

CERTIFICATE OF REPORTER

I, Richard A. Friant, an Electronic Reporter, do hereby certify that I am a disinterested person herein; that I recorded the foregoing California Department of Transportation, California Traffic Control Devices Committee meeting; that it was thereafter transcribed.

I further certify that I am not of counsel or attorney for any of the parties to said meeting, nor in any way interested in the outcome of said matter.

IN WITNESS WHEREOF, I have hereunto set my hand this 8th day of August, 2013.

RICHARD A. FRIANT, CER-D*479

CERTIFICATE OF TRANSCRIBER

I certify that the foregoing is a correct transcript, to the best of my ability, from the electronic sound recording of the proceedings in the above-entitled matter.

August 8, 2012

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